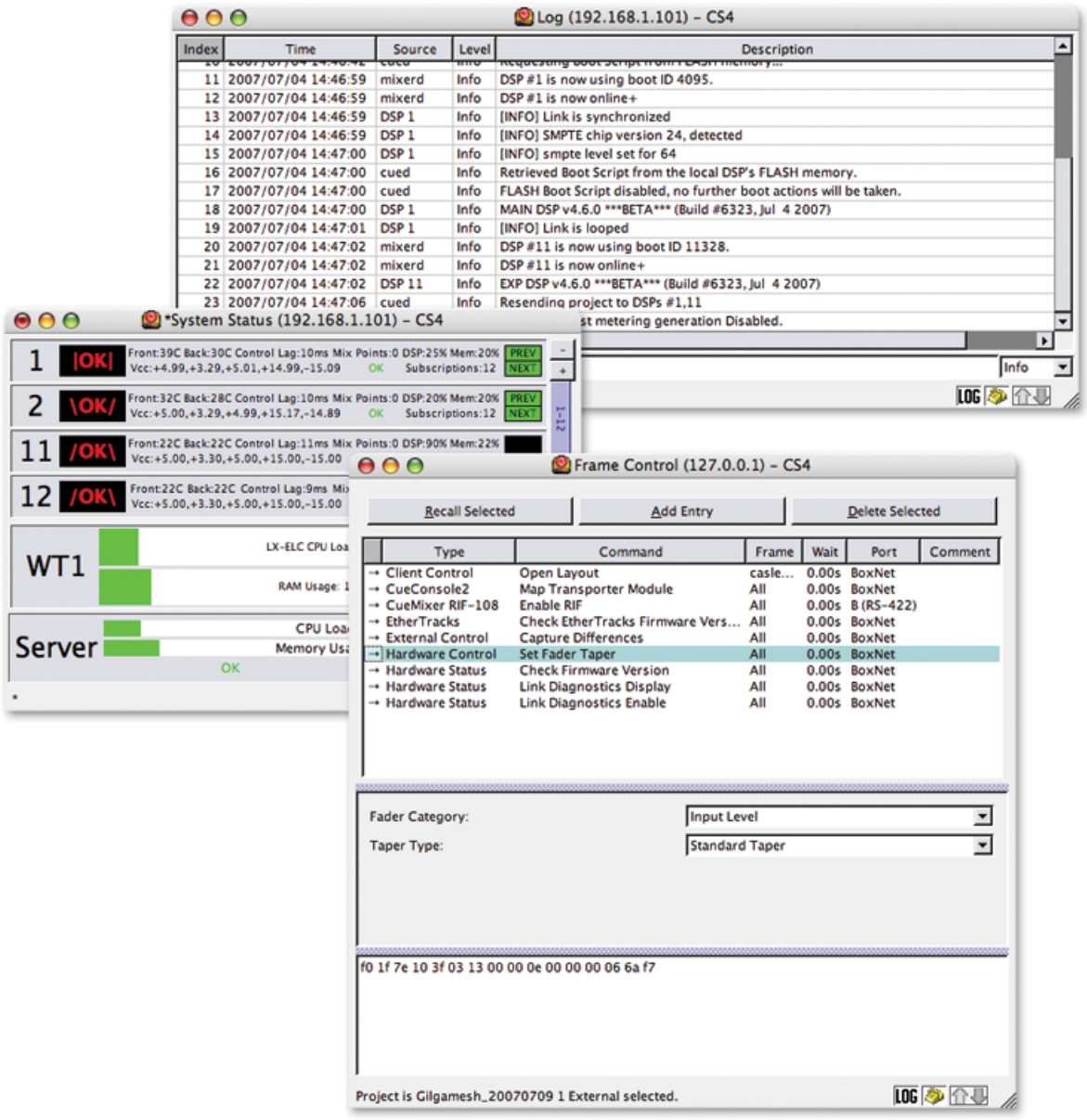
CueStation 4 Command Reference

Matrix3 Audio Show Control System

Edition: 2007-09-05 for CueStation 4.6.0



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CueStation 4 Command Reference

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Command Reference

CueStation™ is a complex application with many available commands. This section provides a command breakdown according to the CueStation window and menu under which they appear.

All Windows

All CueStation windows share the following set of menus, shortcuts, mouse commands, and status information:

Network Menu

Select Server > [Frame name] [Frame IP]

Select Server > This Window Only > [Frame name] [Frame IP]

Select Server > Specify Servers...

Disconnect

Reconnect All

Use UDP Metering

Projects Menu

Clear Project

Open Default Project...

Open Project... **[Cmd+O]**
Merge Project...
Backup Project **[Cmd+B]**
Save Project... **[Cmd+S]**
Save Project As... **[Cmd+Shift+S]**
Save Project As Default
Open Project From Flash
Save Project To Flash
Set Project Title...
Generate Project Report...
Save ELC Troubleshooting Info

Edit Menu

Undo **[Cmd+Z]**
Redo **[Cmd+Y]**
Clear Undo History
New **[Cmd+N]**
Duplicate **[Cmd+D]**
Delete **[Cmd+Del]**
Cut **[Cmd+X]**
Copy **[Cmd+C]**
Paste **[Cmd+V]**
Select All **[Cmd+A]**
Select... **[Cmd+F]**
Lock **[Cmd+Shift+>]**
Unlock **[Cmd+Shift+<]**
Enable **[Cmd+,]**
Disable **[Cmd+.]**
Individualize Subcues **[Cmd+Shift+I]**
Optimize Subcues **[Cmd+Shift+O]**
Batch Modify Control Point Entries... **[Cmd+Shift+C]**

Mixer Menu

Pause Fades **[Cmd+P]**
Resume Fades **[Cmd+Shift+P]**
Finish Fades **[Cmd+;]**
Cancel Fades **[Cmd+/]**
Cancel Trajectories **[Cmd+\]**
Stop All Cue List Players **[Cmd+Shift+/]**
Follow Channel Selects
Time Code Processing Enabled
Track from Top **[Cmd+Option+Shift+T]**
Silence! **[Cmd+Option+Shift+S]**

Master Stop **[Cmd+Option+Shift+M]**

Layout Menu

ToolTips Enabled
Open Layout... **[Cmd+-]**
Open More Layout... **[Cmd+Shift+-]**
Save Layout...
Save Layout As...
Save Layout As Default
Add Custom Utility Button... **[Cmd+']**
Launch Windows in Separate Processes
Use Dark Color Scheme

Windows Menu

Clone Window
Rename Window...
Close Window **[Cmd+W]**
Reset Window **[Cmd+Shift+W]**
Minimize Window **[Cmd+M]**
Zoom Window **[Cmd+Shift+M]**
Full Screen Mode **[Cmd+Shift+F]**
System Level **[Cmd+1]**
Inputs **[Cmd+2]**
Input Processing **[Cmd+3]**
Bus Masters **[Cmd+4]**
Matrix **[Cmd+5]**
Output Masters **[Cmd+6]**
Output Processing **[Cmd+7]**
Aux Masters **[Cmd+8]**
Aux Processing **[Cmd+9]**
Virtual Groups **[Cmd+0]**
Subcue Library **[Option+1]**
Cue Library **[Option+2]**
Cue List **[Option+3]**
Capture **[Option+4]**
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Transport **[Option+6]**
Frame Control **[Option+7]**
System Status **[Option+8]**
Chat **[Option+9]**
Log **[Option+0]**
Input Meters **[Cmd+Option+1]**
Output Meters **[Cmd+Option+2]**

Aux Meters **[Cmd+Option+3]**

Wild Tracks **[Cmd+Option+4]**

VRAS **[Cmd+Option+5]**

Support Files **[Cmd+Option+6]**

Script Execution **[Cmd+Option+7]**

Key Mappings **[Cmd+Option+8]**

Project Notes **[Cmd+Option+9]**

Mixer Configuration **[Cmd+Option+0]**

Access Policies **[Cmd+Option+-]**

System Level Window

See ***All Windows*** (p. 7), above.

Inputs Window

Has the standard ***All Windows*** (p. 7) menus, plus:

Display Menu

The display commands show or hide various control components. The Fader window will resize itself automatically to fit any changes in display. This command is particularly useful when you have limited screen space or when you need to simplify the user interface.

Show Aux Sends

Show Phantom Power

Show Analog Scale

Show Trims

Show Bus Assigns

Show Pans

Show Pan Wait/Fades

Show Buttons

Show Extra Labels

Show Faders

Show Levels

Show Level Wait/Fades

Show Meters

Show Compression

Show Peak Hold

Set Peak Hold Duration...

Show Page Group Controls

Input, Output, and Aux Processing Windows

Has the standard ***All Windows*** (p. 7) menus, plus:

Display Menu

Show EQ Graph

Show EQ Phase
Show EQ Band Settings
Show Delay Settings
Show Delay Distances
Show Dynamics Settings
Show Meters
Show Peak Hold
Set Peak Hold Duration...
Show User CSV Traces
User CSV Trace Settings...
Show Page Group Controls

Bus Masters Window

Has the standard ***All Windows*** (p. 7) menus, plus:

Display Menu

Show Trims
Show Buttons
Show Faders
Show Levels
Show Level Wait/Fades
Show Page Group Controls

Matrix Window

Has the standard ***All Windows*** (p. 7) menus, plus:

Display Menu

Show Levels **[Cmd+L]**
Show Waits **[Cmd+J]**
Show Fades **[Cmd+K]**
Show Page Group Controls

Matrix Menu

Clear Matrix
Clear Displayed Region
Set Diagonal
Set Diagonal, Buses, Outputs

Output Masters Window

Has the standard ***All Windows*** (p. 7) menus, plus:

Display Menu

Show Analog Scale

Show Trims
Show Buttons
Show Faders
Show Levels
Show Level Wait/Fades
Show Meters
Show Compression
Show Peak Hold
Set Peak Hold Duration...
Show Page Group Controls

Aux Masters Window

Has the standard ***All Windows*** (p. 7) menus, plus:

Display Menu

Show Analog Scale
Show Trims
Show Buttons
Show Faders
Show Levels
Show Level Wait/Fades
Show Meters
Show Compression
Show Peak Hold
Set Peak Hold Duration...
Show Page Group Controls

Virtual Groups Window

Has the standard ***All Windows*** (p. 7) menus, plus:

Display Menu

Show Trims
Show Buttons
Show Faders
Show Levels
Show Level Wait/Fades
Show Page Group Controls

Subcue Library Window

Has the standard ***All Windows*** (p. 7) menus, plus:

Subcues Menu

Recall Subcue **[Cmd+R]**

Instant Recall Subcue **[Cmd+T]**
New Subcue > [subcue types]
Duplicate Subcue
Delete Subcue

Cue Library Window

Has the standard ***All Windows*** (p. 7) menus, plus:

Cues Menu

Recall Cue **[Cmd+Shift+R]**
Instant Recall Cue **[Cmd+Shift+T]**
New Cue
Duplicate Cue
Delete Cue

Subcue Entries Menu

Recall Subcue Entry **[Cmd+R]**
Instant Recall Subcue Entry **[Cmd+T]**
New Subcue Entry
Duplicate Subcue Entry
Delete Subcue Entry
Capture Differences **[Cmd+I]**
Update Subcues **[Cmd+U]**

Cue List Window

Has the standard ***All Windows*** (p. 7) menus, plus:

Cue Entries Menu

Recall Cue Entry **[Cmd+Shift+R]**
Instant Recall Cue Entry **[Cmd+Shift+T]**
New Cue Entry
Duplicate Cue Entry
Delete Cue Entry
Stab Time Code **[Cmd+G]**

Subcue Entries Menu

Recall Subcue Entry **[Cmd+R]**
Instant Recall Subcue Entry **[Cmd+T]**
New Subcue Entry
Duplicate Subcue Entry
Delete Subcue Entry
Capture Differences **[Cmd+I]**
Update Subcues **[Cmd+U]**

Capture Window

Has the standard ***All Windows*** (p. 7) menus, plus:

Display Menu

Cue Sort Order > Sort Cues By ID

Cue Sort Order > Sort Cues By Name

Cue Sort Order > Sort Cues By Comment

Cue Sort Order > Sort Cues By Creation Date

Cue Sort Order > Sort Cues By Modification Date

Show 'Inputs' Category

Show 'trim' Category

Show 'bus/matrix' Category

Show 'outputs' Category

Show 'system' Category

Note

The categories listed may vary depending on the subcue categories defined in the Subcue Types tab of the Capture window.

SpaceMap Window

Has the standard ***All Windows*** (p. 7) menus, plus:

Display Menu

Show Matrix Rows

Show SpaceMaps

Show Transport Buttons

Show Trajectory Editor

Show Playback Settings

Show Playback Details

Show Mouse Coordinates

Show All Bus Positions

Show Bus Labels

Show Labels

Show Links

Show Nodes

Show Trajectories

Show Trisets

Show Images

Fill Trisets

Show Cartesian Grid

Snap to Cartesian Grid **[Cmd+G]**

Set Cartesian Grid Spacing...
Show Polar Grid
Snap to Polar Grid **[Cmd+Shift+G]**
Set Polar Grid Spacing...
Show Page Group Controls

Transport Window

Has the standard ***All Windows*** (p. 7) menus, plus:

Display Menu

Show Cue List Name
Show Cue List
Show Cue Index Prefixes
Show Master Stop
Show Time Code
Show/Enable Transport Controls
Show Active Cue Display
Enlarge Active Cue Display
Color Active Cue Display
Show Cue-On-Deck Display
Enlarge Cue-On-Deck Display
Color Cue-On-Deck Display
Show Page Group Controls

Frame Control Window

Has the standard ***All Windows*** (p. 7) menus, as described above.

System Status Window

Has the standard ***All Windows*** (p. 7) menus, plus:

Display Menu

Show DSPs
Show Wild Tracks
Show Server

Chat Window

Has the standard ***All Windows*** (p. 7) menus, plus:

Chat Menu

Clear Chat
Save Chat As...
Save Chat...

Log Window

Has the standard ***All Windows*** (p. 7) menus, plus:

Log Menu

Clear Log

Save Log As...

Save Log...

Input and Output Meters Window

Has the standard ***All Windows*** (p. 7) menus, plus:

Display Menu

Show Meter Levels

Show Compression

Show Labels

Show Peak Hold

Show Peak Hold Text

Set Peak Hold Duration...

Show Tablet Controls

Show Page Group Controls

Aux Meters Window

Has the standard ***All Windows*** (p. 7) menus, plus:

Display Menu

Show Aux Meters

Show PFL/AFL Meters

Show Meter Levels

Show Compression

Show Labels

Show Peak Hold

Show Peak Hold Text

Set Peak Hold Duration...

Show Tablet Controls

Show Page Group Controls

Wild Tracks Window

Has the standard ***All Windows*** (p. 7) menus, plus:

Display Menu

Make Bars Shorter **[Cmd+[]**

Make Bars Taller **[Cmd+]]**

Reset to Default Bar Height **[Cmd+=]**
Browse .lcsDisk File... **[Cmd+L]**
Show Per-Track Display Mode
Show Track IDs
Show Track Labels
Show Level Envelopes
Show Level Envelope Handles
Show Deck Info
Show Deck Graphics
Show File Search Path
Enable Track Position Dragging
Show Meters
Show Meter Levels
Show Compression
Show Meter Labels
Show Peak Hold
Set Peak Hold Duration...
Time Code Display Format > 24 fps
Time Code Display Format > 25 fps
Time Code Display Format > 29.97 fps
Time Code Display Format > 29.97 fps (drop frame)
Time Code Display Format > 30 fps
Time Code Display Format > 30 fps (drop frame)
Time Code Display Format > Samples
Show Page Group Controls

VRAS Window

Has the standard ***All Windows*** (p. 7) menus, plus:

Display Menu

Show Graphs
Show Channel Assignments
Show ER Delays

Support Files Window

Has the standard ***All Windows*** (p. 7) menus, plus:

Files Menu

Import Files... **[Cmd+I]**
Export Selected Files... **[Cmd+E]**
Duplicate File
Delete File

Script Execution Window

Has the standard ***All Windows*** (p. 7) menus, as described above.

Key Mappings Window

Has the standard ***All Windows*** (p. 7) menus, plus:

Mappings Menu

New Mapping

Duplicate Mapping

Delete Mapping

Project Notes Window

Has the standard ***All Windows*** (p. 7) menus, plus:

Notes Menu

Clear Notes

Save Notes As...

Save Notes...

Mixer Configuration Window

Has the standard ***All Windows*** (p. 7) menus, plus:

Display Menu

Show Resource Usage

Show Global Controls

Configuration Menu

Open Configuration File

Save Configuration File As...

Save Configuration File...

Generate Mixer Config Report...

Send Configuration to Frames

Retrieve Configuration from Server

Query Hardware for Configuration...

Frame Templates > Empty Frame Template **[Cmd+Option+E]**

Frame Templates > Primary Frame Template **[Cmd+Option+P]**

Frame Templates > VRAS Frame Template **[Cmd+Option+V]**

Frame Templates > 8x16 Expansion Frame Template **[Cmd+Option+X]**

Frame Templates > 16x8 Expansion Frame Template **[Cmd+Option+Y]**

Renumber All Channels (by Frame)

Renumber All Channels (by Type)

Load Balance...

Show Delays Table...
LX-300 Auto Start...
Test Network Performance...
Force Daemon Migration...
Go to Backup Communication Method...
Upload Firmware...
Upload HTML Archive...

Access Policies Window

Has the standard ***All Windows*** (p. 7) menus, plus:

Access Policies Menu

New Access Policy
Duplicate Access Policy
Delete Access Policy
Invoke Selected Access Policies **[Cmd+I]**
Rescind Selected Access Policies **[Cmd+R]**
Reset Selected Access Policies **[Cmd+Shift+R]**
Reset All Access Policies
Recover Lost Password...

Externals Reference

Externals are grouped in categories, and are used both to create and edit Externals Subcue command entries and Frame Control command entries.

ALC

Automatic Level Control (ALC) provides the ability to map a change in average input or output levels to a control point over a desired range. This can be used, for instance, to automatically adjust background music to be louder as the ambient level gets louder. The mapping is defined with the ALC Setup command. The parameter adjustment is made with the ALC Start command.

ALC Setup

Defines ALC mapping.

Parameters

ID: (0-7)

Enable: checkbox

Source channel type: menu (Input, Output)

Source Channel: (1-512)

Sample duration: (0-4095 seconds, 0=off)

Print Period (seconds): checkbox, (1-4095)

Source minimum: (0-127 dB)

Source maximum: (0-127 dB)

Calibration offset: (-64 to +63 dB)

Destination Category: menu (Level, Trim, Dynamics Threshold, Dynamics Gain)

Destination Item: menu (Automated System Level, Manual System Level, Input Level, Bus Level, Output Level, Aux Output Level, Matrix Crosspoint Level, Aux Send Level, Virtual Group Level)

Destination Channel: (1-512)

Destination minimum: (-100 to +27 dB)

Destination maximum: (-100 to +27 dB)

Start ALC

Applies the ALC mapping.

Parameters

ID: (0-7)

Enable: checkbox

Change target parameter: checkbox

Print: menu

Seconds: (1-4095)

Client Control

These commands are used to control CueStation 4 software connected to the system.

Modify Custom Utility Button

Modifies custom utility buttons.

Parameters

Any Client: checkbox specifies if only the first client should be affected, or the client at the specified IP.

Client IP: IP address to specify the particular instance of CueStation to be controlled.

Window Name: Name of window where the utility button is located.

Button Key String: Key string of targeted utility button(s).

Action: menu (Put Button, Update Button(s), Remove Button(s))

Button Label: checkbox enables a text box to add a new label.

Active Label: checkbox enables a text box to add a new active label.

On Click: checkbox enables you to enter the on-click behavior.

On Click Value(s): checkbox enables you to enter a value when On Click is set to Set Value.

On Release: checkbox enables you to enter the on-release behavior.

On Release Value(s): checkbox enables you to enter a value when On Release is set to Set Value.

Button Color: checkbox enables text box with a color specifying string.

Active Color: checkbox enables text box with a color specifying string for when the button is active.

Control Address: checkbox enables text box to enter a control address.

Target Values: checkbox enables a text box to enter one or more control point values.

Active When: checkbox enables options for when the button should be active.

Change Key String: checkbox enables a text box to enter a new Button Key String.

Open Layout

Opens any layout file that has been added as a Support File.

Parameters

Any Client: checkbox specifies if only the first client should be affected, or the client at the specified IP.

Client IP: IP address to specify the particular instance of CueStation to be controlled.

Layout File Name: Name of the layout file to be opened. The layout file must be added to the Support Files window.

Close Existing Windows First: If this box is checked, the new layout will completely replace the current layout. If not checked, the new layout will be added to the existing layout. This is similar to the **Open More Layout...** menu command.

Load Port Settings: checkbox specifies whether port settings are loaded.

Set Automation Selects

Deprecated version of Set Channel Selects, included for backwards compatibility with older projects.

Set Channel Selects

Used to turn on or off channel (automation) selects in any window.

Parameters

Any Client: checkbox specifies if only the first client should be affected, or the client at the specified IP.

Client IP: IP address to specify the particular instance of CueStation to be controlled.

Action: menu (Set, Add, Remove) specifies whether to turn on only designated selects, turn on designated sets in addition to those active, or turn off designated selects.

Category: menu (Inputs, Outputs, AuxOuts, VGroups, Buses, VRAS, Wild Tracks Units, Wild Tracks Decks, Scripts)

Indices: text string specifies one or more channels. Commas and hyphens may be used, such as “1-3,5-7” to specify channels 1,2,3,5,6,7.

Set Client Address Aliases

Enter an alias name for one or more client IP addresses.

Set Selected Subcue Types

Used to turn on or off subcue types in the Capture window.

Parameters

Any Client: checkbox specifies if only the first client should be affected, or the client at the specified IP.

Client IP: IP address to specify the particular instance of CueStation to be controlled.

Action: menu (Set, Add, Remove) specifies whether to turn on only designated subcue types, turn on designated types in addition to those active, or turn off designated types.

Set Subcue Types: string specifying which types to affect. Commas and asterisks may be used, such as “Input*, Output*” to affect all subcue types beginning with the strings “Input” or “Output”.

Select Capture Mode: checkbox, menu (Capture New (F4), Capture New (F3), Capture Differences (F2), Update Subcues (F1))

Select Cue List: checkbox, Cue List index (0-16382)

Set AutoHide Window: checkbox, Enable checkbox

Set Persistent Subcue Select: checkbox, Enable checkbox

Set Share Existing Subcues: checkbox, Enable checkbox

Select Cue List Player: checkbox, Cue List Player index (1-127)

Set Use Channel Selects: checkbox, Enable checkbox

Set Capture Isolated Channels: checkbox, Enable checkbox

Select Capture Operator: menu (New Control Points Only, Intersection, Union, Old Control Points Only)

Select Capture Precedence: menu (New Values Preferred, Old Values Preferred, New Values Always)

Show Window By Type

Show, hide, create, or close specified window(s) by type.

Parameters

Any Client: checkbox specifies if only the first client should be affected, or the client at the specified IP.

Client IP: IP address to specify the particular instance of CueStation to be controlled.

Action: menu (Show, Hide, Create, Show or Create, Close) specifies the action to be performed for the designated Window Type.

Window Type: menu (Inputs, Input Processing, Bus Masters, Matrix, Output Masters, Output Processing, Aux Masters, Aux Processing, Virtual Groups, Subcue Library, Cue Library, Cue List, Capture, SpaceMap, Transport, Frame Control, System Status, Chat, Log, Input Meters, Output Meters, Aux Meters, Wild Tracks, VRAS, Key Mappings, Project Notes, Support Files, Script Execution, Mixer Configuration)

Set First Column: Enable checkbox, index range (1-512)

Set First Row: Enable checkbox, index range (1-512)

Set Flip Row: Enable checkbox, index range (1-512)

Editing Mode: Enable checkbox, menu (Select Items, Add Speaker Nodes, Add Virtual Nodes, Add Derived Nodes, Add Silent Nodes, Add Trisets, Test Bus, Local Record, Bus Record)

Show Windows By Name

Show, hide, create, or close specified window(s) by name.

Parameters

Any Client: checkbox specifies if only the first client should be affected, or the client at the specified IP.

Client IP: IP address to specify the particular instance of CueStation to be controlled.

Action: menu (Show, Hide, Create, Show or Create, Close) specifies the action to be performed for the designated Window Type.

Window Name: Enter the name of the window to be controlled.

Set First Column: Enable checkbox, index range (1-512)

Set First Row: Enable checkbox, index range (1-512)

Set Flip Row: Enable checkbox, index range (1-512)

CobraNet

These commands control the behavior of CobraNet modules.

List CobraNet Parameter

Parameters

Parameter Type: menu (Bundle for CobraNet Inputs 1-8, Bundle for CobraNet Inputs 9-16, Bundle for CobraNet Outputs 1-8, Bundle for CobraNet Outputs 9-16, Conductor Priority, IP address)

List Error Parameter

Parameters

CobraNet Rx module: menu (Error Indicators, Error Code, Error Count, Error Display)

List Latency Status

No parameters.

List Number of Audio Channels

Parameters

CobraNet Tx module: menu (CobraNet Outputs 1-8, CobraNet Outputs 9-16)

List Number of Unicast Receivers

Parameters

CobraNet Tx module: menu (CobraNet Outputs 1-8, CobraNet Outputs 9-16)

List Number of Unique Audio Channels

Parameters

Currently: menu (Received from the network, Transmitted to the network)

List Rx Parameter

Parameters

CobraNet Rx module: menu (CobraNet Inputs 1-8, CobraNet Inputs 9-16)

Rx Parameter: menu (RX Dropouts, RX Delay)

List ifInErrors

No parameters.

Set Bundle ID

Parameters

Channel Range: menu (CobraNet Inputs 1-8, CobraNet Inputs 9-16, CobraNet Outputs 1-8, CobraNet Outputs 9-16)

Bundle ID: ID range (0-65279)

Set CobraNet Conductor Priority

Parameters

Priority: range (0-255)

Set CobraNet IP

Parameters

IP: (IP Address)

Set Diagnostic Reporting Level

Parameters

Diagnostic Reporting Level: menu (Basic Status, Details, Verbose)

Set Latency Mode

Parameters

Latency Mode: menu (5 1/3 ms latency, 48kHz sample rate; 2 2/3 ms latency, 48kHz sample rate; 1 1/3 ms latency, 48kHz sample rate)

Set Number of Audio Channels

Parameters

CobraNet Tx module: menu (CobraNet Outputs 1-8, CobraNet Outputs 9-16)

# of audio channels for this transmitter: (0-8)

Set Number of Unicast Receivers

Parameters

CobraNet Tx module: menu (CobraNet Outputs 1-8, CobraNet Outputs 9-16)

Max # of receivers for this transmitter: (0-4)

CommSync

Monitor Serial Ports

Parameters

Serial Port: menu (MIDI, RS-232, RS-422A, RS-422B, All Ports)

Outgoing Data Monitoring: menu (Disable Monitoring of Outgoing Serial Data, Print a Brief Summary of Outgoing Serial Data Messages, Print All Outgoing Serial Bytes to the Log)

Incoming Data Monitoring: menu (Disable Monitoring of Incoming Serial Data, Print a Brief Summary of Incoming Serial Data Messages, Print All Incoming Serial Bytes to the Log)

Print Serial Port Transfer Tallies

Parameters

Serial Port: menu (MIDI, RS-232, RS-422A, RS-422B, All Ports)

Print Transfer Tallies: checkbox

Clear Transfer Tallies: checkbox

Clear Total Transfer Tallies: checkbox

Receive MTC

Parameters

Action: menu (Enable Receive, Disable Receive)

SMPTE Generator

Parameters

Frame Rate: menu (24 fps, 25 fps, 29.97 fps Drop Frame, 30 fps Non-Drop)

SMPTE Time: (SMPTE time value)

Set Dropout

Parameters

Dropouts: (1-127)

Set Freewheel Convert Stripe Mode

Parameters

SMPTE Mode: menu (Start Generator / Reset Reader, Start Reader / Regenerator, Start Generator to SMPTE output only, Start Generator to SMPTE output and LX300)

Regen/Freewheel Mode: menu (Regenerate SMPTE In to SMPTE Out, 1 Frame, 2 Frames, 4 Frames, 6 Frames, 8 Frames, 10 Frames, 12 Frames, 14 Frames, 16 Frames, 18 Frames, 20 Frames, 32 Frames, 64 Frames, 128 Frames, 256 Frames)

Frame Rate: menu (24 fps, 25 fps, 29.97 fps, 30 fps)

SMPTE Level: (0-99)

SMPTE Time: (SMPTE time value)

Set Regenerator Enabled

Parameters

Action: menu (Enable Regenerator, Disable Regenerator)

Set SMPTE Frame Rate Logic

Parameters

Time Code Rate: menu (Best Guess, Use NTSC 29.97fps, Use 30fps)

Drop Frame: menu (Detect from Time Code Stream, Force Drop Frame, Force Non-Drop)

Set SMPTE Generator Level

Parameters

SMPTE Level: (0-99)

Set Serial Port Enabled

Parameters

Serial Port: menu (MIDI, RS-232, RS-422A, RS-422B, All Ports)

Enable Transmit: checkbox

Enable Receive: checkbox

Set Shuttle

Parameters

Shuttle: (1-127)

Stop Striping SMPTE or MTC

No parameters.

CueConsole2

Adjust Brightness

Parameters

Brightness Adjustment: menu (Very Dark, Dark, Normal, Bright, Very Bright)

Action: menu (Absolute Set, Relative Change)

Bind Module To Client

Parameters

Client IP: (IP Address)

Bind Type: menu (Bind Listed Modules to One Specified Client IP, Bind Listed Modules to Any Client IP, Bind Listed Modules to Another Specified Client IP, Unbind Listed Modules)

Module IP: (IP Address)

Change Page

Parameters

Page Group: (1-128)

Action: menu (Relative Move, Absolute Set)

Column Page: (-512 to 512)

Enable Change: checkbox

Allow Wrap: checkbox

Row Page: (-512 to 512)

Enable Change: checkbox

Allow Wrap: checkbox

Enable Transporter Update Columns

Parameters

Module IP: (IP Address)

Column 1 Action: menu (Enable Column, Disable Column, Leave Column as is)

Column 2 Action: menu (Enable Column, Disable Column, Leave Column as is)

Column 3 Action: menu (Enable Column, Disable Column, Leave Column as is)

Column 4 Action: menu (Enable Column, Disable Column, Leave Column as is)

Lock Console

Parameters

Action: menu (Unlock Console, Lock Console, Toggle Locked/Unlocked)

Log Module Error Counts

Parameters

Log Cumulative/Global Stats: checkbox

Log Stats for All Modules: checkbox

Module IP: (IP Address)

Print UDP Event Log(s): checkbox

Clear UDP Event Log(s): checkbox

Map Editor Controls To Cues

Parameters

Module IP: (IP Address)

Add New Mapping: button

Mapping: menu (Press, Release)

[Button]: (click to select)

[Action]: menu (to Recall, to Update, Unmap)

[Target]: menu (Cue, Subcue)

[ID]: (0-16383)

on player #: (Cue List Player ID)

Remove: button

Map Editor Module

Parameters

Module IP: (IP Address)

Editor Group: (1-128)

Main Channel: menu (Input, Aux Master, Output, Bus, VGroup, System Level, Don't Change)

Set Index: checkbox

Index: (1-400)

Alt Channel: menu (Input, Aux Master, Output, Bus, VGroup, System Level, Don't Change)

Set Index: checkbox

Index: (1-400)

Left Listen Meter: menu (Input, Aux Master, Output, Unmap, Don't Change)

Set Index: checkbox

Index: (1-400)

Right Listen Meter: menu (Input, Aux Master, Output, Unmap, Don't Change)

Set Index: checkbox

Index: (1-400)

Stereo Mode: menu (Set to Normal Mode, Set to Stereo Mode, Leave Unchanged)

Map Fader Controls To Cues

Parameters

Module IP: (IP Address)

Add New Mapping: button

Mapping: menu (Press, Release)

[Button]: (click to select Fader button)

[Action]: menu (to Recall, to Update, Unmap)

[Target]: menu (Cue, Subcue)

[ID]: (0-16383)

on player #: (Cue List Player ID)

Remove: button

Map Fader Module

Parameters

Module IP: (IP Address)

Page Group: (1-128)

Editor Group: (1-128)

Fader Type: menu (Input, Output, AuxMaster, VGroup, Bus, Trajectory, System, VRAS, Matrix, AuxSend, Disable, Don't Change)

menu: (dependent on Fader Type)

LCD Button Type: menu (Mute, Invert, Solo, Isolate, Channel Enable, Dynamics Bypass (Band 1), Dynamics Bypass (Band 2), EQ Bypass, Delay Bypass, Disable)

Direction: menu (Across a Row, Down a Column)

First Column: (1-16)

Last Column: (1-16)

CS4 Column: (1-400)

CS Row: (1-400)

Use Custom Fader Range: checkbox

Minimum Level (dB): (-90 to +10)

Maximum Level (dB): (-90 to +10)

Map Meter Controls To Cues

Parameters

Module IP: (IP Address)

Add New Mapping: button

Mapping: menu (Press, Release)

[Button]: (click to select)

[Action]: menu (to Recall, to Update, Unmap)

[Target]: menu (Cue, Subcue)

[ID]: (0-16383)

on player #: (Cue List Player ID)

Remove: button

Map Meter Module

Parameters

Module IP: (IP Address)

Page Group: (1-128)

Editor Group: (1-128)

Control Type: menu (Input, Output, Aux, Disable)

Input Mute Type: menu (Input Channel On/Off, Input Mute)

First Column: (1-16)

Last Column: (1-16)

CS4 Column: (1-400)

Enable EQ Editing: checkbox

Meter Mode: menu (Level, Dynamics, Level and Dynamics)

Initial Edit Mode: menu (Don't Change, Scale, VGroup A, VGroup B, Fader, Trim, Delay, Pan, Aux Send)

Button Press Edit Mode: menu (Don't Change, Scale, VGroup A, VGroup B, Fader, Trim, Delay, Pan, Aux Send)

Encoder Press Edit Mode: menu (Don't Change, Scale, VGroup A, VGroup B, Fader, Trim, Delay, Pan, Aux Send)

Map Transporter Controls To Cues

Parameters

Module IP: (IP Address)

Add New Mapping: button

Mapping: menu (Press, Release)

[Button]: (click to select)

[Action]: menu (to Recall, to Update, Unmap)

[Target]: menu (Cue, Subcue)

[ID]: (0-16383)

on player #: (Cue List Player ID)

Remove: button

Map Transporter Module

Parameters

Module IP: (IP Address)

Stop Mode: menu (Pressing the Stop Button Sends a 'Master Stop', Pressing the Stop Button Stops the Associated Cue List Player Only)

Cue List Player #: (1-127)

Cue List Player Group: (1-128)

Fader Type: menu (Input, Output, AuxMaster, VGroup, Bus, Trajectory, System, VRAS, Matrix, AuxSend, Disable, Don't Change)

LCD Button Type: menu (Mute, Invert, Solo, Isolate, Disable)

Direction: menu (Across a Row, Down a Column)

CS4 Column: (1-400)

CS4 Row: (1-400)

Use Custom Fader Range: checkbox

Minimum Level (dB): (-90 to +10)

Maximum Level (dB): (-90 to +10)

Fader Page Group: (1-128)

Show Cue List Indices: checkbox

Add New Mapping: button

Override Editor Labels

Parameters

Module IP: (IP Address)

Add New Label: button

Label: (click to select Editor button)

[Label Type]: menu (Text, Go, Stop, Top, Prev, Next, LCS, Blank)

[Label Text]: text

[Color 1]: menu (No Preference, Dim Red, Medium Red, Bright Red, Dim Green, Medium Green, Bright Green, Dim Yellow, Medium Yellow, Bright Yellow, Dim Orange, Medium Orange, Bright Orange, Dim Puce, Medium Puce, Bright Puce)

[Color 2]: menu (No Preference, Dim Red, Medium Red, Bright Red, Dim Green, Medium Green, Bright Green, Dim Yellow, Medium Yellow, Bright Yellow, Dim Orange, Medium Orange, Bright Orange, Dim Puce, Medium Puce, Bright Puce)

Remove: button

Override Fader Labels

Parameters

Module IP: (IP Address)

Add New Label: button

Label: (click to select Fader button)

[Label Type]: menu (Text, Go, Stop, Top, Prev, Next, LCS, Blank)

[Label Text]: text

[Color 1]: menu (No Preference, Dim Red, Medium Red, Bright Red, Dim Green, Medium Green, Bright Green, Dim Yellow, Medium Yellow, Bright Yellow, Dim Orange, Medium Orange, Bright Orange, Dim Puce, Medium Puce, Bright Puce)

[Color 2]: menu (No Preference, Dim Red, Medium Red, Bright Red, Dim Green, Medium Green, Bright Green, Dim Yellow, Medium Yellow, Bright Yellow, Dim Orange, Medium Orange, Bright Orange, Dim Puce, Medium Puce, Bright Puce)

Remove: button

Override Meter Labels

Parameters

Module IP: (IP Address)

Add New Label: button

Label: (click to select Meter button)

[Label Type]: menu (Text, Go, Stop, Top, Prev, Next, LCS, Blank)

[Label Text]: text

[Color 1]: menu (No Preference, Dim Red, Medium Red, Bright Red, Dim Green, Medium Green, Bright Green, Dim Yellow, Medium Yellow, Bright Yellow, Dim Orange, Medium Orange, Bright Orange, Dim Puce, Medium Puce, Bright Puce)

[Color 2]: menu (No Preference, Dim Red, Medium Red, Bright Red, Dim Green, Medium Green, Bright Green, Dim Yellow, Medium Yellow, Bright Yellow, Dim Orange, Medium Orange, Bright Orange, Dim Puce, Medium Puce, Bright Puce)

Remove: button

Override Transporter Labels

Parameters

Module IP: (IP Address)

Add New Label: button

Label: (click to select Editor button)

[Label Type]: menu (Text, Go, Stop, Top, Prev, Next, LCS, Blank)

[Label Text]: text

[Color 1]: menu (No Preference, Dim Red, Medium Red, Bright Red, Dim Green, Medium Green, Bright Green, Dim Yellow, Medium Yellow, Bright Yellow, Dim Orange, Medium Orange, Bright Orange, Dim Puce, Medium Puce, Bright Puce)

[Color 2]: menu (No Preference, Dim Red, Medium Red, Bright Red, Dim Green, Medium Green, Bright Green, Dim Yellow, Medium Yellow, Bright Yellow, Dim Orange, Medium Orange, Bright Orange, Dim Puce, Medium Puce, Bright Puce)

Remove: button

Reset Module

Parameters

Affect All Modules: checkbox

Module IP: (IP Address)

Remove Module: checkbox

Clear Module Mappings: checkbox

Clear Cue Mappings: checkbox

Clear Label Overrides: checkbox

Set Clip Indicator Parameters

Parameters

Clip Threshold (dB below FS): (0-127)

Indicator Timeout (tenths of a second): checkbox, (1-1630)

Set Communication Method

Parameters

Affect All Modules: checkbox

Module IP: (IP Address)

Enable Send UDP to Module(s): checkbox

Enable Receive UDP from Module(s): checkbox

Make these settings the default: checkbox

Set DLI Debounce Period

Parameters

Module IP: (IP Address)

Module Type: menu (Fader Pack, Meter Module, Transporter, Editor)

Control: menu (Digital Input #1, Digital Input #2)

Button Debounce Period (ms): (0-10000)

Set Editor Controls Debounce Periods

Parameters

Module IP: (IP Address)

Add New Mapping: button

Mapping: (click to select Editor button)

[Debounce Period]: (0-10000) ms

Remove: button

Set Fader Active Menu Row

Parameters

Module IP: (IP Address)

Action: menu (Set Active row Index to, Increase Active Row Index by, Decrease Active Row Index by) (1-4)

Set Fader Controls Debounce Periods

Parameters

Module IP: (IP Address)

Add New Mapping: button

Mapping: (click to select Fader button)

[Debounce Period]: (0-10000) ms

Remove: button

Set Global Debounce Period

Parameters

Button Debounce Period (ms): (0-10000)

Set Meter Controls Debounce Periods

Parameters

Module IP: (IP Address)

Add New Mapping: button

Mapping: (click to select Meter button)

[Debounce Period]: (0-10000) ms

Remove: button

Set Module Address Aliases

Parameters

Add New Module Address Alias: button

Delete Any Preexisting Aliases: checkbox

[Alias name]: Enter alias name

is an alias for: [IP Address(es)]

Remove: button

Set Page Limits

Parameters

Page Group: (1-128)

Min Column Page: (-512 to 512)

Max Column Page: (-512 to 512)

Column Page Size: (-512 to 512)

Min Row Page: (-512 to 512)

Max Row Page: (-512 to 512)

Row Page Size: (-512 to 512)

Set Peak Hold Indicator Duration

Parameters

Affect All Modules: checkbox

Module IP: (IP Address)

Peak Hold Indicator Duration (ms): (0-604800000)

Make this setting the default: checkbox

Set Transporter Controls Debounce Periods

Parameters

Module IP: (IP Address)

Add New Mapping: button

Mapping: (click to select Transporter button)

[Debounce Period]: (0-10000) ms

Remove: button

CueMixer RIF-108

Disable RIF

No Parameters.

Enable RIF

No Parameters.

Print User A Cues

Parameters

Page: (1-16)

Set Button Cue Overlay

Parameters

Affect all Buttons: checkbox

Button Index: (0-31)

Unassign Cue: checkbox

Cue ID: (0-16382)

Set Button Debounce Period

Parameters

Affect all Buttons: checkbox

Button Index: (0-31)

Debounce interval: (0-16383) ms

Set Communication Port

Parameters

Port: menu (Port A, Port B)

Set Control Enabled

Parameters

Affect all Controls: checkbox

Control Index: (0-39)

Enabled: checkbox

Set Cue List Player

Parameters

Cue List Player #: (1-127)

Set CueMixer Mode

Parameters

Mode: menu (System Master, Input Levels, Bus Levels, Output Levels, Aux Levels, Virtual Group Levels, User A, Input EQs, Output EQs, Aux EQs, Input Trims, Bus Trims, Output Trims, Aux Trims, Virtual Group Trims)

Set Page: (1-64)

Enable: checkbox

Set Enabled Console Modes

Parameters

Enable Masters: menu (Disable, Don't Change, Enable)

Enable Console Faders: menu (Disable, Don't Change, Enable)

Enable Bus Levels: menu (Disable, Don't Change, Enable)

Enable Outputs: menu (Disable, Don't Change, Enable)

Enable Aux Outputs: menu (Disable, Don't Change, Enable)

Enable Virtual Groups: menu (Disable, Don't Change, Enable)

Enable User A Cues: menu (Disable, Don't Change, Enable)

Set Enabled EQ Trim Modes

Parameters

Enable Input EQ/Delay: menu (Disable, Don't Change, Enable)

Enable Output EQ/Delay: menu (Disable, Don't Change, Enable)

Enable Aux Out EQ/Delay: menu (Disable, Don't Change, Enable)

Enable Input Trims: menu (Disable, Don't Change, Enable)

Enable Bus Level Trims: menu (Disable, Don't Change, Enable)

Enable Output Trims: menu (Disable, Don't Change, Enable)

Enable Aux Out Trims: menu (Disable, Don't Change, Enable)

Enable VGroup Trims: menu (Disable, Don't Change, Enable)

Set Enabled Other Modes

Parameters

Enable Transport: menu (Disable, Don't Change, Enable)

Enable Stop: menu (Disable, Don't Change, Enable (Master Stop), Enable (Stop Associated Cue List Only))

Enable Editing: menu (Disable, Don't Change, Enable)

Enable User A and B Buttons: menu (Disable, Don't Change, Enable)

Set LED State

Parameters

Affect all Buttons: checkbox

Button Index: (0-31)

LED State: menu (Force LED Off, Force LED On, Resume normal LED Behaviour)

Set User A B Button

Parameters

Mode: menu (User A, User B)

Unassign Cue: checkbox

Cue ID: (0-16382)

Set User A Faders

Parameters

User A Faders Mode: menu (Disabled, System Master, Input Levels, Bus Levels, Output Levels, Aux Levels, Virtual Group Levels, Input Trims, Bus Trims, Output Trims, Aux Trims, Virtual Group Trims)

Page: (1-64)

Set User A Mode Cue

Parameters

Page: (1-16)

Button: (1-16)

Unassign Cue: checkbox

Cue ID: (0-16382)

Set User A Page

Parameters

Page: (1-16)

EtherTracks

Check EtherTracks Firmware Version

No Parameters.

Close Connection Group

Parameters

Connection Group ID: (0-16383)

List EtherTracks IP Address

No Parameters.

List EtherTracks MAC Address

No Parameters.

List EtherTracks Network Statistics

Parameters

Log Output Level: menu (None, Info, Warning, Error, Critical)

Open TCP Cue Connection

Parameters

IP: (IP Address)

Port: (0-65535)

Connection ID: (0-16383)

Group ID: (0-16383)

Recall Cue on Connection Group

Parameters

Recall: menu (Cue, Subcue)

Group ID: (0-16383)

Cue ID: (0-16383)

Send Raw Data

Parameters

Target Device IP: (IP Address)

Protocol: menu (TCP, UDP, Lemur TCP)

Send Port: (1-65535)

8-Bit Hex Data: text

Send Support File

Parameters

Target Device IP: (IP Address)

Protocol: menu (TCP, UDP, Lemur TCP)

Support File Name: (file name)

Send Port: (1-65535)

On Lemur Reboot: menu (Do Nothing, Recall Cue, Recall Subcue, Leave Unchanged) [Cue/Subcue ID]

External Control

Capture Differences

Parameters

Effect Current Cue: checkbox

Cue ID: (0-16382)

Cue List Player #: (1-127)

Overwrite Subcues: checkbox

GO Next Cue in Cue List

Parameters

Affect All Cue List Players: checkbox

Cue List Player #: (1-127)

Log Debug Message

Parameters

Log Message Text: text

Recall Cue

Parameters

Cue ID: (0-16383)

Cue List Player: (1-127)

Recall Subcue

Parameters

Subcue ID: (0-16383)

Cue List Player: (1-127)

STOP

Parameters

Master Stop: checkbox

Cue List Player #: (1-127)

Select Cue List

Parameters

Affect All Cue List Players: checkbox

Cue List ID: (0-16383)

Cue List Player #: (1-127)

Set MIDI Program Change Channel

Parameters

Action: menu (Disable, Use Channel 1, Use Channel 2, Use Channel 3, Use Channel 4, Use Channel 5, Use Channel 6, Use Channel 7, Use Channel 8, Use Channel 9, Use Channel 10, Use Channel 11, Use Channel 12, Use Channel 13, Use Channel 14, Use Channel 15, Use Channel 16)

Port: menu (MIDI, RS232, RS422-A, RS422-B, Any Port)

Set Trigger Cues Via Time Code Enabled

Parameters

Enable: menu (Enable, Disable)

Skip Entries in Cue List

Parameters

Affect All Cue List Players: checkbox

Cue List Player #: (1-127)

Skip Count: (1-8191)

Skip Backwards: checkbox

Skip To Top of Cue List

Parameters

Affect All Cue List Players: checkbox

Cue List Player #: (1-127)

Stop Fades

Parameters

Finish Type: menu (Cancel Fades (stop faders at their current position), Finish Fades (force faders to their final state))

Affect All Cue List Players: checkbox

Cue List Player #: (1-127)

Track From Top

Parameters

Cue List Player #: (1-127)

Destination Cue List ID: (0-16382)

Use Active Value: checkbox

Destination Cue Entry Index: (0-16382)

Use Active Value: checkbox

Trigger 4 Cues via Digital Logic Input Closures

Parameters

Logic Input 1 Close (ID=5): menu (Disable, Recall Cue, Recall Subcue) [ID]

Cue List Player #: (1-127)

Logic Input 2 Close (ID=6): menu (Disable, Recall Cue, Recall Subcue) [ID]

Cue List Player #: (1-127)

Logic Input 3 Close (ID=7): menu (Disable, Recall Cue, Recall Subcue) [ID]

Cue List Player #: (1-127)

Logic Input 4 Close (ID=8): menu (Disable, Recall Cue, Recall Subcue) [ID]

Cue List Player #: (1-127)

Trigger 4 Cues via Digital Logic Input Releases

Parameters

Logic Input 1 Release (ID=1): menu (Disable, Recall Cue, Recall Subcue) [ID]

Cue List Player #: (1-127)

Logic Input 2 Release (ID=2): menu (Disable, Recall Cue, Recall Subcue) [ID]

Cue List Player #: (1-127)

Logic Input 3 Release (ID=3): menu (Disable, Recall Cue, Recall Subcue) [ID]

Cue List Player #: (1-127)

Logic Input 4 Release (ID=4): menu (Disable, Recall Cue, Recall Subcue) [ID]

Cue List Player #: (1-127)

Trigger Cue via Digital Logic Input

Parameters

Trigger ID: (1-128)

Action: (Disable, Recall Cue, Recall Subcue)

Trigger Source: menu (Digital Logic Input 1 Release, Digital Logic Input 2 Release, Digital Logic Input 3 Release, Digital Logic Input 4 Release, Digital Logic Input 1 Close, Digital Logic Input 2 Close, Digital Logic Input 3 Close, Digital Logic Input 4 Close)

Recall Cue ID: (0-16383)

Cue List Player #: (1-127)

Trigger Cue via MIDI

Parameters

Trigger ID: (1-128)

Expect MIDI on Port: menu (MIDI, RS232, RS422-A, RS422-B, Any Port)

Source MIDI Event Type: menu (Note On, Note Off, Controller)

MIDI Channel: (1-16)

Note/Controller #: (0-127)

Velocity/Controller Value: (0-127)

Action: menu (Disable, Recall Cue, Recall Subcue)

Recall Cue ID: (0-16382)

Cue List Player #: (1-127)

Trigger Transport Action via Digital Logic Input

Parameters

Trigger ID: (1-128)

Action: menu (Enable, Disable)

Trigger Source: menu (Digital Logic Input 1 Release, Digital Logic Input 2 Release, Digital Logic Input 3 Release, Digital Logic Input 4 Release, Digital Logic Input 1 Close, Digital Logic Input 2 Close, Digital Logic Input 3 Close, Digital Logic Input 4 Close)

Transport Action: menu (Go Next, Skip to First, Skip Previous, Skip to Next, Master Stop, Stop)

Affect All Cue List Players: checkbox

Cue List Player #: (1-127)

Trigger Transport Action via MIDI

Parameters

Trigger ID: (1-128)

Expect MIDI on Port: menu (MIDI, RS232, RS422-A, RS422-B, Any Port)

Action: menu (Enable, Disable)

Source MIDI Event Type: menu (Note On, Note Off, Controller)

MIDI Channel: (1-16)

Note/Controller #: (0-127)

Velocity/Controller Value: (0-127)

Transport Action: menu (Go Next, Skip to First, Skip Previous, Skip to Next, Master Stop, Stop)

Affect All Cue List Players: checkbox

Cue List Player #: (1-127)

Update Cue

Parameters

Cue ID: (0-16383)

Overwrite Subcues: checkbox

Update Subcue

Parameters

Subcue ID: (0-16383)

Flash Memory

Erase Flash

Parameters

Flash Area to Erase: menu (Main DSP Flash, User Flash, EtherTracks Flash, EXP Flash)

Load Project From Flash

No Parameters.

Save Project To Flash

No Parameters.

Hardware Control

Analog IO dBu FS

Parameters

Slot: menu (A, B, C)

Channel: (1-8)

Scale: menu (+6 dBu FS, +16 dBu FS, +26 dBu FS)

Raw Data

Parameters

7-Bit Hex Bytes: text

Add LCS Header & Footer: checkbox

Set Fader Taper

Parameters

Fader Category: menu (Aux Out Level, Aux Out Trim, Aux Send Level, Bus Level, Bus Trim, Input Level, Input Trim, Manual System Level, Matrix Level, Output Level, Output Trim, System Level, VGroup Level, VGroup Trim)

Taper Type: menu (Standard Taper, Linear Taper, Alternate Taper)

Set Front Panel Message

Parameters

Message Text: text

Set Meter Update Rate Limit

Parameters

Max Meter Update Rate (Hz): (1-100)

Set Mix Point Limit

Parameters

Mix Point Limit: (0-2048)

Set Relay

Parameters

Relay Select: menu (Relay 1, Relay 2, Relay 3, Relay 4)

Action: menu (Open, Close)

Set Stereo Compressor

Parameters

Channel Type: menu (Input, Output, Aux Out)

Left Channel: (1-400)

Right Channel: (1-400)

Mode: menu (Independent, Stereo)

Set Temperature Limits

Parameters

Yellow threshold (C): (0-127)

Red threshold (C): (0-127)

Set Time And Date

Parameters

Hour: (0-23)

Minute: (0-59)

Second: (0-59)

Date: menu (Sunday, Monday, Tuesday, Wednesday, Thursday, Friday, Saturday)

[Month]: menu (January, February, March, April, May, June, July, August, September, October, November, December)

[Day]: (1-31)

[Year]: (2003-2107)

Hardware Status

Check DSP Utilization

No Parameters.

Check Firmware Version

No Parameters.

Check Flash Memory Utilization

No Parameters.

Check SDRAM Memory Utilization

No Parameters.

Check Temperature

No Parameters.

Check Voltage

No Parameters.

Display Raw Matrix

No Parameters.

Display VRAS Params

No Parameters.

Enable Digital Test

Parameters

Enable Digital Test: checkbox

Get Digital Test Status

No Parameters.

Get LX300 Time and Date

No Parameters.

IOPoints Diagnostics Display

No Parameters.

IOPoints Diagnostics Enable

No Parameters.

Link Diagnostics Display

No Parameters.

Link Diagnostics Enable

No Parameters.

List Debug Messages

No Parameters.

Request CASL Report

No Parameters.

Reset Debug Messages Memory

No Parameters.

MIDI

Channel Pressure

Parameters

- **Channel:** (1-16)
- **Pressure:** (0-127)

Control Change

Parameters

- **Channel:** (1-16)
- **Controller #:** (0-127)
- **Value:** (0-127)

Note

Parameters

- **Channel:** (1-16)
- **Note #:** (0-127)
- **Velocity:** (0-127)

Note Off

Parameters

- **Channel:** (1-16)
- **Note #:** (0-127)
- **Velocity:** (0-127)

Note On

Parameters

- **Channel:** (1-16)
- **Note #:** (0-127)
- **Velocity:** (0-127)

Pitch Bend

Parameters

- **Channel:** (1-16)
- **Value:** (-8192 to +8191)

Polyphonic Key Pressure

Parameters

- **Channel:** (1-16)
- **Note #:** (0-127)
- **Pressure:** (0-127)

Program Change

Parameters

- **Channel:** (1-16)
- **Program:** (0-127)

MMC

Eject

Parameters

- **Device ID:** (0-127)

Fast Forward

Parameters

- **Device ID:** (0-127)

Locate

Parameters

- **Device ID:** (0-127)
- **Rate:** (0-3)
- **Time:** (Time Code value)

Pause

Parameters

- **Device ID:** (0-127)

Play

Parameters

Device ID: (0-127)

Play Deferred

Parameters

Device ID: (0-127)

Record Exit

Parameters

Device ID: (0-127)

Record Pause

Parameters

Device ID: (0-127)

Record Strobe

Parameters

Device ID: (0-127)

Rewind

Parameters

Device ID: (0-127)

Stop

Parameters

Device ID: (0-127)

MSC

Fire

Parameters

Device ID: (0-127)

Command Format: (0-127)

Macro Number: (0-127)

Go Cue

Parameters

Device ID: (0-127)

Command Format: (0-127)

Cue Number: (max 64 characters): text

Go Next

Parameters

Device ID: (0-127)

Command Format: (0-127)

Load Cue

Parameters

Device ID: (0-127)

Command Format: (0-127)

Cue Number: (max 64 characters): text

MSC Stop

Parameters

Device ID: (0-127)

Command Format: (0-127)

Receive MSC

Parameters

Enable MSC Reception: checkbox

Respond to Device ID: (0-126) checkbox

Respond to Command Format: (0-126) checkbox

Resume

Parameters

Device ID: (0-127)

Command Format: (0-127)

Resume Cue

Parameters

Device ID: (0-127)

Command Format: (0-127)

Cue Number: (max 64 characters): text

Open Sound Control

Map OSC Controls

OSC mapping externals are explained in more detail in ***Open Sound Control*** (p. 79).

Parameters

OSC Device IP: (IP Address)

OSC Device Port: (1-65535)

Existing Mappings: menu (Don't Clear Any Existing Mappings, Clear Any Existing Mappings for this device, Clear All Existing Mappings)

Add New Mapping: button

OSC Name #1: text

[Mapping behaviour]: menu (Float Range Behaviour, Int32 Range Behaviour, Bool Range Behaviour, String Behaviour, Button Behaviour, Unmap)

Remove: button

LCS Address: text

Time Avg: (time value) sec, (1-50) Hz

Value Range: Min (value) Max (value)

OSC Mapping:

Time Avg: (time value) sec, (1-50) Hz

Value Range: Min (value) Max (value)

Resend OSC State

Parameters

Resend All Mappings: checkbox

OSC Device IP: IP Address or alias

Resend to All Ports: checkbox

OSC Device UDP Port: (1-65535)

Send Lemur Project

Parameters

Lemur Device IP: (IP Address)

Lemur XML Support File Name: (file name)

On Lemur Reboot: menu (Do Nothing, Recall Cue, Recall Subcue, Leave Unchanged) [Cue/Subcue ID]

Send OSC Command

Parameters

OSC Device IP: (IP Address)

OSC Device Port: (1-65535)

OSC Method Name: text

Add New Argument: button

OSC Arg #1: menu (Int32, Float32, String, Blob, Int64, TimeTag, Float64, Boolean True, Boolean False, Nil, Infinitum)

[Argument value]: (depends on argument type)

Remove: button

Set OSC Address Aliases

Parameters

Add New OSC Address Alias: button

Delete Any Preexisting Aliases: checkbox

[Alias name]: text

is an alias for: (IP Address)

Remove: button

Set OSC Control Name Aliases

Parameters

Add New OSC Address Alias: button

Delete Any Preexisting Aliases: checkbox

[Alias name]: text

is an alias for: (IP Address)

Remove: button

Set OSC Warnings Level

Parameters

OSC Warnings: menu (Disable OpenSoundControl unknown-controls warnings, Enable OpenSoundControl unknown-controls warnings)

Python Control

Run Background Python Script

Parameters

Script Source: menu (Support File, Inline Python, Support File plus Command)

Support File Name: (file name)

Script Arguments: text

Python Source: text

Send Command To Python Script

Parameters

Send To: menu (Script with Specified Script Execution ID, All Executing Foreground Scripts, All Executing Background Scripts, All Executing Scripts)

Script ID: (1-32)

Command Text: text

SpaceMap

AutoDraw Trajectory

Parameters

Clear Existing Trajectory Nodes First: checkbox

Trajectory ID: (0-16383)

Log Debug Output While Generating: checkbox

Initial value for parametric argument (t): (number value)

Final value for parametric argument (t): (number value)

Number of Trajectory Points: (1-1000)

X Generator Function [-1000,+1000]: (function)

Y Generator Function [-1000,+1000]: (function)

Duration Generator Function (ms): (function)

Pan Generator Function [-100,100]: (function)

Divergence Generator Function [0,100]: (function)

Level Generator Function [0,100]: (function)

Enable or Disable SyncMaps

Parameters

Group ID of First SyncMap: (0-16382)

Number of SyncMap Group: (0-16383)

Action: menu (Enable, Disable)

Pause Trajectory

Parameters

First Bus: (1-256)

Number of Buses: (1-256)

Stop Trajectory

Parameters

First Bus: (1-256)

Number of Buses: (1-256)

Unpause Trajectory

Parameters

First Bus: (1-256)

Number of Buses: (1-256)

Voice Detect

Save Voice Detect Matrix To Subcue

Parameters

Matrix Type(s) to Save: menu (All Types, Speech and Music Only, Speech Only, Music Only, Silence Only)

External Subcue to Save To: (0-16383)

Set Voice Detect Debug Printing Enabled

Parameters

Detection Mode: menu (Voice Detect, Train Speech, Train Music, Train Silence)

Enable Printing: checkbox

Set Voice Detect Hysteresis

Parameters

Target Mode: menu (All Modes, Speech, Music, Silence)

Hysteresis Count: (1-20)

Interpret Silence As: menu (Speech, Music, Silence, Same as Previous Result)

Set Voice Detect Matrix Values

Parameters

Matrix Type: menu (Speech, Music, Silence)

Matrix Values: (values)

Set Voice Detect Recall Action

Parameters

Event Type: menu (Switch to Speech, Switch to Music, Switch to Silence, Detected Speech, Detected Music, Detected Silence, Detector is Unsure)

Action Type: menu (Do Nothing, Recall Cue, Recall Subcue)

Cue/Subcue ID: (0-16383)

Set Voice Detect Sample Size

Parameters

Sample Duration: (208ms-2000ms)

Wild Tracks

Adjust WildTracks Media Path

Parameters

Path to Modify: menu (File Search Path, File Record Path)

Action: menu (Set Path Clauses, Add Path Clauses, Remove Path Clauses)

Path Clauses: (paths)

Backup WildTracks Drive

Parameters

Source Drive SCSI ID: (0-15)

Destination Drive SCSI ID: (0-15)

Control Decks by Key

Parameters

Deck Key: (key name)

Action: menu (No Action, Pause, Play, Record, Reset Deck, Clear Deck, Skip Backward, Skip Forward, Enable Deck or Tracks, Disable Deck or Tracks, Hold Deck, Un-Hold Deck, Isolate Deck, Un-Isolate Deck, Set Track Loop Count)

New Loops Left: (0-100000)

Infinite Loops: checkbox

Target Track: (1-127)

Affect All Tracks: checkbox

Set Deck Position: checkbox, time value

Match Only These Decks: checkbox, decks

Create Virtual Drive File

Parameters

Drive SCSI ID: (0-15)

Display SCSI Drive Diagnostics

Parameters

SCSI Drive ID: (0-15)

Diagnostic Type: menu (Pass/Fail Only, Print Detailed Info, Run Quick Self-Test, Run Extended Self-Test)

Format WildTracks Drive

Parameters

Drive SCSI ID: (0-15)

Mount WildTracks Drives

No Parameters.

Repair WildTracks Drive

Parameters

Drive SCSI ID: (0-15)

Rescan SCSI

No Parameters.

Run Shell Command

Parameters

Log Output Level: menu (None, Info, Warning, Error, Critical)

Shell Command: text

Set Loop Counter

Parameters

Target Deck: (1-32)

Affect All Decks: checkbox

Target Track: (1-127)

Affect All Tracks: checkbox

New Loops Left: (0-100000)

Infinite Loops: checkbox

Set Time Code Sync Logic

Parameters

Enable Resynchronization: menu (Disable Resynchronization, Enable Resynchronization (during preroll only), Enable Resynchronization (all the time))

Maximum Allowed Lock Error (ms): (1-2000)

Re-Sync deck after (ms): (0-10000)

Unmount WildTracks Drives

No Parameters.

Verify WildTracks Subcues

No Parameters.

Control Point Indices

This chapter provides a reference list of all control points used to create subcues.

Control Point Value Types

This section provides a list of all types of values used in control points.

cvt_bool
Value is a boolean: true or false.

cvt_count
Value is an int32 representing the number of something in a set (0 or higher).

cvt_dbid
Value is an int32 indicating the ID of an item in the automation database.

cvt_dynamicstype
Value is an int32; one of the enumerated dynamics types.

cvt_eqtype
Value is an int32; one of the enumerated EQ types.

cvt_float
Value is a float (any float is permissible).

cvt_freq
Value is a float that represents a frequency in Hz.

cvt_gain
Value is a float that represents a decibel gain value.

cvt_index
Value is an int32 representing an index into an ordered set (or -1 if invalid).

cvt_label
Value is a human-readable string.

cvt_linklight
A value between 0 and 3, inclusive, indicating "off", "red", "green", and "orange".

cvt_meters
Value is a float representing a physical distance or offset in meters.

cvt_position
Value is a Point (2 floats) representing a location in a SpaceMap.

cvt_ms
Value is an int32 representing milliseconds.

cvt_6ms
Value is an int32 representing sixths-of-milliseconds.... i.e. 1=166us, 2=333us, 3=500us, etc.

cvt_nfloat
Value is a normalized float. Must be between 0.0f and 1.0f, inclusive.

cvt_q
Value is a float representing 'q'.

cvt_temperature
A floating point value indicating a temperature in degrees Celsius.

cvt_timecode
Value is an int32 representing a bit-packed time code value according to the MTC spec.

cvt_traceString
A string encodes a set of control points along a signal path, e.g. "I1-25,36,47,50-50;B1-5;1-10".

cvt_voltage
A floating point value indicating a voltage (in volts).

Input Control Points

Input Aux Level
Input *inputIndex* Aux *auxIndex* Level: cvt_gain

Input Aux Pan
Input *inputIndex* Aux *auxIndex* Pan: cvt_nfloat

Input Aux Pre/Post
Input *inputIndex* Aux *auxIndex* AffectPost: cvt_bool

Input Bus Assign Enable
Input *inputIndex* Assign *assignIndex* Enable: cvt_bool

Input Bus Assign Index
Input *inputIndex* Assign *assignIndex* Index: cvt_index

Input Channel Enable
Input *inputIndex* Channel Enable: cvt_bool

Input Delay Enable
Input *inputIndex* Delay Enable: cvt_bool

Input Delay Time
Input *inputIndex* Delay: cvt_ms

Input Dynamics Enable
Input *inputIndex* Dynamics *bandIndex* BandEnabled: cvt_bool

Input Dynamics Type
Input *inputIndex* Dynamics *bandIndex* Type: cvt_dynamicstype

Input Dynamics Threshold
Input *inputIndex* Dynamics *bandIndex* Threshold: cvt_gain

Input Dynamics Hold Time
Input *inputIndex* Dynamics *bandIndex* Hold: cvt_6ms

Input Dynamics Attack Time
Input *inputIndex* Dynamics *bandIndex* AttackTime: cvt_6ms

Input Dynamics Release Time
Input *inputIndex* Dynamics *bandIndex* ReleaseTime: cvt_6ms

Input Dynamics Ratio
Input *inputIndex* Dynamics *bandIndex* Ratio: cvt_float

Input Dynamics Output Gain
Input *inputIndex* Dynamics *bandIndex* Level: cvt_gain

Input Dynamics Link Channel
Input *inputIndex* Dynamics Link Channel: cvt_index

Input Dynamics Link Enable
Input *inputIndex* Dynamics Link Enable: cvt_bool

Input EQ Band Bypass
Input *inputIndex* EQ *bandIndex* BandEnabled: cvt_bool

Input EQ Enable
Input *inputIndex* EQ Enable: cvt_bool

Input EQ Freq
Input *inputIndex* EQ *bandIndex* Frequency: cvt_freq

Input EQ Gain
Input *inputIndex* EQ *bandIndex* Level: cvt_gain

Input EQ Q
Input *inputIndex* EQ *bandIndex* Q: cvt_q

Input EQ Status
Input *inputIndex* EQ Status: cvt_int32 (read-only)

Input EQ Type
Input *inputIndex* EQ *bandIndex* Type: cvt_eqtype

Input EQ Label
Input *inputIndex* EQ *bandIndex* Label: cvt_string

Input Invert
Input *inputIndex* Invert: cvt_bool

Input Isolate
Input *inputIndex* Isolate [isoType]: cvt_int32 (>0 means isolated)

Input Label
Input *inputIndex* Label: cvt_string

Input Level
Input *inputIndex* Level: cvt_gain

Input Pan
Input *inputIndex* Pan: cvt_nfloat

Input Phantom Power
Analog Input *inputIndex* Phantom Enable: cvt_bool

Input Mute
Input *inputIndex* Mute: cvt_bool

Input Scale
Analog Input *inputIndex* Scale: cvt_dB

Input Solo
Input *inputIndex* Solo: cvt_bool

Input Trim
Input *inputIndex* Trim: cvt_gain

Input VGroup A Assign
Input *inputIndex* VGroup 1: cvt_index

Input VGroup B Assign
Input *inputIndex* VGroup 2: cvt_index

Bus and Matrix Control Points

Bus Invert
Bus *busIndex* Invert: cvt_bool

Bus Isolate
Bus *busIndex* Isolate *isoType*: cvt_int32 (>0 means isolated)

Bus Label
Bus *busIndex* Label: cvt_string

Bus Level
Bus *busIndex* Level: cvt_gain

Bus Matrix Level
Bus *busIndex* Output *outputIndex* Level: cvt_gain

Bus Mute
Bus *busIndex* Mute: cvt_bool

Bus Solo
Bus *busIndex* Solo: cvt_bool

Bus Trim
Bus *busIndex* Trim: cvt_gain

Bus VGroup A Assign
Bus *busIndex* VGroup 1: cvt_index

Bus VGroup B Assign
Bus *busIndex* VGroup 2: cvt_index

Output and Aux Control Points

Output Channel Enable
Output *outputIndex* Channel Enable: cvt_bool

Output Delay Enable
Output *outputIndex* Delay Enable: cvt_bool

Output Delay Time
Output *outputIndex* Delay: cvt_ms

Output Dynamics Attack Time
Output *outputIndex* Dynamics *bandIndex* AttackTime: cvt_6ms

Output Dynamics Enable
Output *outputIndex* Dynamics *bandIndex* Band Enabled: cvt_bool

Output Dynamics Gain
Output *outputIndex* Dynamics *bandIndex* Level: cvt_gain

Output Dynamics Hold Time
Output *outputIndex* Dynamics *bandIndex* Hold: cvt_6ms

Output Dynamics Link Channel
Output *outputIndex* Dynamics Link Channel: cvt_index

Output Dynamics Link Enable
Output *outputIndex* Dynamics Link Enable: cvt_bool

Output Dynamics Ratio
Output *outputIndex* Dynamics *bandIndex* Ratio: cvt_float

Output Dynamics Release Time
Output *outputIndex* Dynamics *bandIndex* ReleaseTime: cvt_6ms

Output Dynamics Threshold
Output *outputIndex* Dynamics *bandIndex* Threshold: cvt_gain

Output Dynamics Type
Output *outputIndex* Dynamics *bandIndex* Type: cvt_dynamicstype

Output EQ Bypass
Output *outputIndex* EQ Enable: cvt_bool

Output EQ Band Bypass
Output *outputIndex* EQ *bandIndex* BandEnabled: cvt_bool

Output EQ Freq
Output *outputIndex* EQ *bandIndex* Frequency: cvt_freq

Output EQ Gain
Output *outputIndex* EQ *bandIndex* Level: cvt_gain

Output EQ Q
Output *outputIndex* EQ *bandIndex* Q: cvt_q

Output EQ Status
Output EQ Status: cvt_int32 (read only)

Output EQ Type
Output *outputIndex* EQ *bandIndex* Type: cvt_eqtype

Output EQ Label
Output *outputIndex* EQ *bandIndex* Label: cvt_string

Output Invert
Output *outputIndex* Invert: cvt_bool

Output Isolate
Output *outputIndex* Isolate *isoType*: cvt_int32 (>0 means isolated)

Output Label
Output *outputIndex* Label: cvt_string

Output Level
Output *outputIndex* Level: cvt_gain

Output Mute
Output *outputIndex* Mute: cvt_bool

Output Scale
Analog Output *outputIndex* Scale: cvt_dB

Output Solo
Output *outputIndex* Solo: cvt_bool

Output Trim
Output *outputIndex* Trim: cvt_gain

Output VGroup A Assign
Output *outputIndex* VGroup 1: cvt_index

Output VGroup B Assign
Output *outputIndex* VGroup 2: cvt_index

Aux Channel Enable
Aux *auxIndex* Channel Enable: cvt_bool

Aux Delay Enable
Aux *auxIndex* Delay Enable: cvt_bool

Aux Delay Time
Aux *auxIndex* Delay: cvt_ms

Aux Dynamics Attack Time
Aux *auxIndex* Dynamics *bandIndex* AttackTime: cvt_6ms

Aux Dynamics Enable
Aux *auxIndex* Dynamics *bandIndex* Band Enabled: cvt_bool

Aux Dynamics Gain
Aux *auxIndex* Dynamics *bandIndex* Level: cvt_gain

Aux Dynamics Hold Time
Aux *auxIndex* Dynamics *bandIndex* Hold: cvt_6ms

Aux Dynamics Link Channel
Aux *auxIndex* Dynamics Link Channel: cvt_index

Aux Dynamics Link Enable
Aux *auxIndex* Dynamics Link Enable: cvt_bool

Aux Dynamics Ratio
Aux *auxIndex* Dynamics *bandIndex* Ratio: cvt_float

Aux Dynamics Release Time
Aux *auxIndex* Dynamics *bandIndex* ReleaseTime: cvt_6ms

Aux Dynamics Threshold
Aux *auxIndex* Dynamics *bandIndex* Threshold: cvt_gain

Aux Dynamics Type
Aux *auxIndex* Dynamics *bandIndex* Type: cvt_dynamicstype

Aux EQ Bypass
Aux *auxIndex* EQ Enable: cvt_bool

Aux EQ Band Bypass
Aux *auxIndex* EQ *bandIndex* BandEnabled: cvt_bool

Aux EQ Freq
Aux *auxIndex* EQ *bandIndex* Frequency: cvt_freq

Aux EQ Gain
Aux *auxIndex* EQ *bandIndex* Level: cvt_gain

Aux EQ Q
Aux *auxIndex* EQ *bandIndex* Q: cvt_q

Aux EQ Status
Aux EQ Status: cvt_int32 (read only)

Aux EQ Type
Aux *auxIndex* EQ *bandIndex* Type: cvt_eqtype

Aux EQ Label
Aux *auxIndex* EQ *bandIndex* Label: cvt_string

Aux Invert
Aux *auxIndex* Invert: cvt_bool

Aux Isolate
Aux *auxIndex* Isolate *isoType*: cvt_int32 (>0 means isolated)

Aux Label
Aux *auxIndex* Label: cvt_string

Aux Level
Aux *auxIndex* Level: cvt_gain

Aux Mute
Aux *auxIndex* Mute: cvt_bool

Aux Scale
Analog Aux *auxIndex* Scale: cvt_dB

Aux Solo
Aux *auxIndex* Solo: cvt_bool

Aux Trim
Aux *auxIndex* Trim: cvt_gain

Aux VGroup A Assign
Aux *auxIndex* VGroup 1: cvt_index

Aux VGroup B Assign
Aux *auxIndex* VGroup 2: cvt_index

System Aux Mute
System Aux Mute: cvt_bool

VGroup Control Points

VGroup Invert
VGroup *vgroupIndex* Invert: cvt_bool

VGroup Isolate
VGroup *vgroupIndex* Isolate *isoType*: cvt_int32 (>0 means isolated)

VGroup Label
VGroup *vgroupIndex* Label: cvt_string

VGroup Level
VGroup *vgroupIndex* Level: cvt_gain

VGroup Mute
VGroup *vgroupIndex* Mute: cvt_bool

VGroup PFL
VGroup *vgroupIndex* Listen Enable: cvt_bool

VGroup PFL Hold
VGroup Listen Hold: cvt_bool

VGroup Solo
VGroup *vgroupIndex* Solo: cvt_bool

VGroup Trim
VGroup *vgroupIndex* Trim: cvt_gain

Metering Control Points

Aux Clipping Indicator
Aux *auxIndex* Clip: cvt_bool

Aux Dynamics Meter
Aux *auxIndex* Dynamics Meter: cvt_gain

Aux Meter Level
Aux *auxIndex* Meter: cvt_gain

Input Clipping Indicator
Input *inputIndex* Clip: cvt_bool

Input Dynamics Meter
Input *inputIndex* Dynamics Meter: cvt_gain

Input Meter Level
Input *inputIndex* Meter: cvt_gain

Output Clipping Indicator
Output *outputIndex* Clip: cvt_bool

Output Dynamics Meter
Output *outputIndex* Dynamics Meter: cvt_gain

Output Meter Level
Output *outputIndex* Meter: cvt_gain

Automation Control Points

Active Cue Entry ID
Automation *playerID* Active CueEntry ID

Active Cue ID
Automation *playerID* Active Cue ID: cvt_index

Active Cue Index
Automation *playerID* Active CueEntry Index: cvt_index

Active Cue List Length
Automation *playerID* Active CueList Size: cvt_index

Active Cue List ID
Automation *playerID* Active CueList ID: cvt_index

Active Subcue ID
Automation *playerID* Active Subcue ID: cvt_index

Cue-On-Deck Cue Entry ID
Automation *playerID* Status CueEntry ID

Fades Paused Status
Automation *playerID* Enable: cvt_bool

MTC Status
TimeCode MTC: cvt_timecode

Next Cue Entry ID
Automation *playerID* Next CueEntry ID

Next Cue Index
Automation *playerID* Next CueEntry Index: cvt_index

Recall Time Remaining
Automation Active Duration: cvt_int (seconds)

Time Code Enabled
System Time Code Enable: cvt_bool

Time Code Enabled
Automation TimeCode Enable: cvt_bool

SpaceMap Control Points

Bus SpaceMap A ID
Bus *busIndex* SpaceMap A: cvt_dbid

Bus SpaceMap B ID
Bus *busIndex* SpaceMap B: cvt_dbid

SpaceMap Bus Position
Bus *busIndex* Position: cvt_position

SpaceMap Bus Trajectory Divergence
Bus *busIndex* Trajectory Divergence: cvt_float

SpaceMap Bus Trajectory Enable
Bus *busIndex* Trajectory Enable: cvt_bool

SpaceMap Bus Trajectory Hold
Bus *busIndex* Trajectory Hold: cvt_bool

SpaceMap Bus Trajectory ID
Bus *busIndex* Trajectory ID: cvt_dbid

SpaceMap Bus Trajectory Isolate
Bus *busIndex* Trajectory Isolate: cvt_int32 (>0 means isolated)

SpaceMap Bus Trajectory Level
Bus *busIndex* Trajectory Level: cvt_gain

SpaceMap Bus Trajectory Loop Count
Bus *busIndex* Trajectory Repetitions: cvt_float

SpaceMap Bus Trajectory Offset
Bus *busIndex* Trajectory Offset X: cvt_float

Bus *busIndex* Trajectory Offset Y: cvt_float

SpaceMap Bus Trajectory Pan
Bus *busIndex* Trajectory Pan: cvt_float

SpaceMap Bus Trajectory Playback Rate
Bus *busIndex* Trajectory Rate: cvt_float

SpaceMap Bus Trajectory Position
Bus *busIndex* Trajectory PositionPercent: cvt_float

SpaceMap Bus Trajectory Rotation
Bus *busIndex* Trajectory Rotation: cvt_degrees

SpaceMap Bus Trajectory Scale
Bus *busIndex* Trajectory Scale X: cvt_float

Bus *busIndex* Trajectory Scale Y: cvt_float

SpaceMap Bus Trajectory Time
Bus *busIndex* Trajectory Duration: cvt_ms

SpaceMap Bus Trajectory Time Position
Bus *busIndex* Trajectory Position: cvt_ms

Wild Tracks Control Points

Wild Tracks Batch File Name
WildTracks *wtUnit* Track *TrackID* Path Media: (string)

Wild Tracks Channel Deck
WildTracks *wtUnit* Channel *channelIndex* Deck: cvt_index (int32)

Wild Tracks Channel Status
WildTracks *wtUnit* Channel *channelIndex* Status: cvt_int

Wild Tracks Deck Hold
WildTracks *wtUnit* Deck *deckID* Hold: cvt_int32

Wild Tracks Deck Isolate
WildTracks *wtUnit* Deck *deckID* Isolate: cvt_int32

Wild Tracks Deck Label
WildTracks *wtUnit* Deck *deckID* Label: (string)

Wild Tracks Deck Length
WildTracks *wtUnit* Deck *deckID* Duration: (int64)

Wild Tracks Deck Media
WildTracks *wtUnit* Deck *deckID* Media: (Message)

Wild Tracks Deck Position
WildTracks *wtUnit* Deck *deckID* Position: (int64) (in samples)

Wild Tracks Deck Status
WildTracks *wtUnit* Deck *deckID* Status: (int32)

Wild Tracks Dropped Sample Status
WildTracks *wtUnit* ShapeFactor Status: (int32)

Wild Tracks DSP Usage Percentage
WildTracks *wtUnit* DSP: cvt_norm

Wild Tracks Master Deck Hold
Master WildTracks *wtUnit* Deck Hold: cvt_int32

Wild Tracks Master Deck Isolate
Master WildTracks *wtUnit* Deck Isolate: cvt_int32

Wild Tracks Maximum Memory
WildTracks *wtUnit* Maximum Memory: cvt_int

Wild Tracks Media Path
WildTracks *wtUnit* Media Path: (String)

Wild Tracks Memory Usage
WildTracks *wtUnit* Memory: (uint32)

Wild Tracks Recording Path
WildTracks *wtUnit* Recording Path: (String)

Wild Tracks TimeCode Enable
WildTracks *wtUnit* TimeCode Enable: cvt_bool

Note

For Wild Tracks control points, *TrackID* is determined by the following function:

TrackID = (*deckID* x 128) + *trackNumber*

Wild Tracks Track Label
WildTracks *wtUnit* Track *TrackID* Label: (string)

Wild Tracks Track Length
WildTracks *wtUnit* Track *TrackID* Duration: (int64) (in samples)

Wild Tracks Track Loop Count
WildTracks *wtUnit* Track *TrackID* Loopback: (int64)

Wild Tracks Track Stream Count
WildTracks *wtUnit* Track *TrackID* Count: (uint32)

VRAS Control Points

VRAS Algorithm Type
VRAS *vrasID* Type: (int32)

VRAS Damping Frequency
VRAS *vrasID* Reverb *damperID* Damping Frequency: (float)(0.02f-20.0f KHz)

VRAS Damping Percentage
VRAS *vrasID* Reverb *damperID* Damping Level: (float)(0.0f-1.0f percent)

VRAS Damping Type (mid/low/high)
VRAS *vrasID* Reverb *damperID* Damping Type (damper #)

VRAS Delta Maximum
VRAS *vrasID* Reverb *diffusion* DeltaMax: (float)(0.7f-0.9f ???)

VRAS ER Cutoff Frequency
VRAS *vrasID* EarlyReflections Frequency: (float)(0.2f-20.0f KHz)

VRAS ER Delay
VRAS *vrasID* EarlyReflections *bandID* Delay: (float)(0.0f-0.5f seconds)

VRAN ER High-frequency Attenuation Percentage
VRAS *vrasID* EarlyReflections Attenuation: (float)(0.0f-1.0f percent)

VRAS ER Input Configuration Matrix
VRAS *vrasID* EarlyReflections Input Config: (MessageRef) (matrix spec)

VRAS ER Output Configuration Matrix
VRAS *vrasID* EarlyReflections Output Config: (MessageRef) (matrix spec)

VRAS Input Channel Mapping
VRAS *vrasID* Channel *bandID* Input: (float)(0.0f-0.5f seconds)

VRAS Input Channel Mute
VRAS *vrasID* Channel *bandID* Mute: cvt_bool

VRAS Input Configuration Matrix
VRAS *vrasID* Reverb Input Config: (MessageRef) (matrix spec)

VRAS Input Delay
VRAS *vrasID* Channel *bandID* Delay: (float)(0.0f-??? seconds)

VRAS Input Level
VRAS *vrasID* Channel *bandID* Attenuation: cvt_gain

VRAS Input VGroup
VRAS *vrasID* Channel *bandID* VGroup *vgroupLayer*: cvt_index

VRAS Reverberation Time
VRAS *vrasID* Reverb Duration: (float)(0.2f-10.0f seconds)

VRAS Reverb Diffusion Count
VRAS *vrasID* Reverb Channel Count: (int32) (0-14)

VRAS Shape Factor
VRAS *vrasID* Reverb *diffusion* ShapeFactor: (float)(2.0f-20.0f ???)

VRAS Unitary/Direct Level
VRAS *vrasID* Reverb Level: (float)(0.0f-1.0f percent)

Frame Control Points

Channel to Frame/Slot/Position Mapping
Input *inputIndex* Channel Position: cvt_int

Output *outputIndex* Channel Position: cvt_int

AuxOut *auxIndex* Channel Position: cvt_int

DSP Online Status
Frame *dspID* Enable: cvt_bool

Ethertracks CPU Load Percentage
Server DSP: cvt_nfloat

Ethertracks Memory Usage Percentage
Server Memory: cvt_nfloat

Frame Session ID
Frame *dspID* ID: int32

Frame Voltage Sensors
Frame *dspID* LowLevel *sensorID* Voltage: cvt_voltage

Frame Relays
Frame *dspID* LowLevel *relayID* Output

Frame Digital Logic Inputs
Frame *dspID* LowLevel *inputID* Input

Front Panel Display Value
DSP *dspID* Status Label: cvt_string

Link Light
Frame *frameID* Link *lightID*: cvt_int

Project Checksum
DSP *dspID* Checksum: cvt_int

STATUS_FIELD_DSP_PERCENTAGE
Frame *dspID* DSP: cvt_nfloat

STATUS_FIELD_MEMORY_PERCENTAGE
Frame *dspID* Memory: cvt_nfloat

STATUS_FIELD_CONTROL_LATENCY
Frame *dspID* ControlLag: cvt_ms

STATUS_FIELD_NUM_MIX_POINTS
Frame *dspID* MixPoints: cvt_count

STATUS_FIELD_TEMPERATURE_FRONT
Frame *dspID* Temperature 0: cvt_temperature

STATUS_FIELD_TEMPERATURE_BACK
Frame *dspID* Temperature 1: cvt_temperature

STATUS_FIELD_ANALOG_FIVE_VOLTS
Frame *dspID* Voltage 0: cvt_voltage

STATUS_FIELD_ANALOG_FIFTEEN_VOLTS
Frame *dspID* Voltage 1: cvt_voltage

STATUS_FIELD_ANALOG_NEGATIVE_FIFTEEN_VOLTS
Frame *dspID* Voltage 2: cvt_voltage

STATUS_FIELD_DIGITAL_FIVE_VOLTS
Frame *dspID* Voltage 3: cvt_voltage

STATUS_FIELD_DIGITAL_THREE_POINT_THREE_VOLTS
Frame *dspID* Voltage 4: cvt_voltage

STATUS_FIELD_SUBSCRIPTION_COUNT
Frame *frameID* Subscription Count: cvs_int

System LowLevel Meter Server
System LowLevel Meter Server: cvt_ipaddr

System Setup Type
System Type: cvt_int (0==simulator only 1==EtherNet 2=ELC 3=serial)

Track-From-Top Status
DSP *dspID* Track Count: cvt_int

Miscellaneous Control Points

System Level
System Level: cvt_gain

System Trim
System Trim: cvt_gain

System Mute
System Mute: cvt_bool

System Isolate
System Isolate 0 (isoType): cvt_int32 (>0 means isolated)

LowLevel Fade Time
System LowLevel FadeTime: cvt_ms

PFL Hold
Input Listen Hold: cvt_bool

Input PFL Enable
Input *inputIndex* Listen *listenIndex* Enable: cvt_bool

Output AFL Enable
Output *outputIndex* Listen *listenIndex* Enable: cvt_bool

Aux AFL Enable
Aux *auxIndex* Listen *listenIndex* Enable: cvt_bool

Aux Signal-Path Channel Set
Aux *auxIndex* Active Channel Set: cvt_traceString

Input Signal-Path Channel Set
Input *inputIndex* Active Channel Set: cvt_traceString

Bus Signal-Path Channel Set
Bus Active Channel Set: cvt_traceString

Output Signal-Path Channel Set
Output *outputIndex* Active Channel Set: cvt_traceString

Page Group Page Number
PageGroup *groupID* Position *axisID*: cvt_int32

Page Group Page Size
PageGroup *groupID* Size *axisID*: cvt_int32

Python Script Status
Script *scriptID* Status: cvt_int (0==stopped 1==running 2==restart)

Python Script Launch Command
Script *scriptID* Command: cvt_string

Python Script Label
Script *scriptID* Label: cvt_string

Wild Tracks Reference

Cables and Connectors

Ethernet

Ethernet cables are wired to the EIA/TIA 568 standard. All network wiring must support IEEE 802.3 standard.

SCSI

The LX-ELC Ethertracks Module uses a VHDCI SCSI Connector. The current model WTX-HD Wild Tracks Hard Drives all use this same connector. The manufacturer part numbers are AMP 787254-1.

The VHDCI 0.8mm 68-pin connector has 68 pins arranged in two rows. The each row has 34 pins. This connector has also been called SCSI-5 as well as Ultra 2 SCSI, AMP champ 0.8mm, and VHDCI-68.

Caution

All Wild Tracks disks attached to a single LX-ELC module must have a unique SCSI ID. The ID must be in the range 0 to 6, or 8 to 15. Do not use SCSI ID 7. SCSI ID 7 is the ID of the LX-ELC module.

Telnet

A telnet session to an LX-ELC Ethertracks module can be used for troubleshooting and diagnosis as well as general information.

From a terminal window type "telnet" followed by the IP address of the LX-ELC module. In this example, the IP address is 192.168.1.101.

```
telnet 192.168.1.101
```

After you press the enter key, the following text appears:

```
Trying 192.168.1.121...
Connected to 192.168.1.121.
Escape character is '^]'.

etrx login:
```

Type "root" for your login and press the Enter key.

```
etrx login: root


BusyBox v1.00-pre5 (2004.01.15-15:21+0000) Built-in shell (ash)
Enter 'help' for a list of built-in commands.

#
```

To end the telnet session, type "exit" at the # prompt.

Check Linux Version

"ELC" is an acronym for "Embedded Linux Computer". To check the Linux version, type "cat /proc/version" at the # prompt, and the following information (or similar) appears:

```
# cat /proc/version
Linux version 2.4.23-lcs (lcsaudio@lcslinuxbuild) (gcc version 3.3.3
 (DENX ELDK 3.1.1 3.3.3-9)) #1 Wed Mar 28 01:10:56 PST 2007
#
```

Check CIFS Configuration

If you get an error code –50 when trying to do a Samba mount of a drive connected to an LX-ELC module, check to see if the CIFS configuration file is present and lists the drive. Enter the following command:

```
# cat /samba/lib/smb.conf
```

And the contents of the configuration file will appear. Here is an example configuration from an ELC module that has two Wild Tracks drives mounted:

```
[global]
workgroup = WILDTRACKS
netbios name = ELC1-101
server string = Ethertracks Samba Server
security = user
null passwords = yes
log file = /tmp/samba.log
max log size = 0
log level = 2
guest account = etrx
map to guest = Bad User
max smbd processes = 10
remote announce =
remote browse sync =
local master = yes

[1-101-scsi0]
comment = Mounted Wild Tracks Disk
path = /mnt/scsi0
guest ok = yes
writeable = yes
printable = no

[1-101-scsi1]
comment = Mounted Wild Tracks Disk
path = /mnt/scsi1
guest ok = yes
writeable = yes
printable = no
```

Other Telnet Commands

cat /proc/kmsg
: Lists out all the debug messages generated by the Linux kernel so far.

cat /proc/scsi/scsi
: List out info about any connected SCSI drives.

/root/lxelcd mem
: Show memory usage by all processes on the LX-ELC module.

top -d 1
Show CPU usage for all processes running on the LX-ELC module.

ps -aux
List all processes running on the LX-ELC module.

/root/lxelcd listallawedclients
Show which client IP addresses are allowed to connect to mixerd and cued on this CPU.

/root/lxelcd setallowedclients [ip addresses]
Tell mixerd and cued only to accept connections from the specified IP addresses.

/root/lxelcd trace
Watch the background process's most recent checkpoint tags update.

CSDO

The CueStation installation directory contains a separate program called *csdo*. Csdo is a command line tool for controlling a Matrix3 server, without using CueStation.

Setup

To use csdo, you will need to use a command line-capable program on your computer. The following instructions cover the default command line programs that are included with each operating system, but feel free to use a different one.

Mac OS X

1. Open the Terminal application. By default, it is located in Applications/Utilities. When you open the program, you will see something like the following:

   ```
   Last login: Mon Jul 30 17:12:02 on ttyp2
   Welcome to Darwin!
   computer-name:~ user-name$
   ```

2. Using the command line, navigate to the directory where CueStation (and csdo) is installed. For instance, if CueStation is installed in your Applications folder, you might type something like:

   ```
   computer-name:~ user-name$ cd /Applications/CueStation-4.6.0/
   ```

and then type the **Return** key. You will then see the command line prompt change to the following:

```
computer-name:/Applications/CueStation-4.6.0 user-name$
```

3. Enter the command you would like to use, starting with "./csdo" and the server's IP address. For instance, if you wanted to recall cue 3 on a server located at 192.168.0.101, you would enter the following:

   ```
   computer-name:/Applications/CueStation-4.6.0 user-name$ ./csdo 192.168.0.101 recall cue 3
   ```

See the next section, ***Commands*** (p. 72), for a list of all possible commands. Or, just enter "./csdo" and type the Return key.

Windows XP

1. Open the MS-DOS Prompt. Click on the **Start** menu, then select **Run...** Enter "cmd" into the text box, and click **OK**. You will see a window with the following text:

   ```
   Microsoft Windows XP [Version 5.1.2600]
   (C) Copyright 1985-2001 Microsoft Corp.

   C:\Documents and Settings\Administrator>
   ```

2. Using the command line, navigate to the directory where CueStation (and csdo) is installed. For instance, if CueStation is installed in the Program Files folder, you might type something like:

   ```
   C:\Documents and Settings\Administrator> cd "\Program Files\CueStation-4.6.0"
   ```

and then type the Return key. You will then see the command line prompt change to the following:

```
C:\Program Files\CueStation-4.6.0>
```

3. Enter the command you would like to use, starting with "csdo.exe" and the server's IP address. For instance, if you wanted to recall cue 3 on a server located at 192.168.0.101, you would enter the following:

```
C:\Program Files\CueStation-4.6.0> csdo.exe 192.168.0.101 recall cue 3
```

See the next section, ***Commands*** (p. 72), for a list of all possible commands. Or, just enter "csdo.exe" and type the Return key.

SuSE Linux

1. Open a shell window. Click on the green SuSE icon in the bottom left, and select **Run Command...** Enter "konsole" into the text box, and click **OK**. When you open the program, you will see something like the following:

```
username@computer-name:~>
```

2. Using the command line, navigate to the directory where CueStation (and csdo) is installed. For instance, if CueStation is installed in your Applications folder, you might type something like:

```
username@computer-name:~> cd /Applications/CueStation-4.6.0/
```

and then type the **Return** key. You will then see the command line prompt change to the following:

```
username@computer-name:/Applications/CueStation-4.6.0>
```

3. Enter the command you would like to use, starting with "./csdo" and the server's IP address. For instance, if you wanted to recall cue 3 on a server located at 192.168.0.101, you would enter the following:

```
username@computer-name:/Applications/CueStation-4.6.0> ./csdo 192.168.0.101 recall cue 3
```

See the next section, ***Commands*** (p. 72), for a list of all possible commands. Or, just enter "./csdo" and type the Return key.

Commands

Parameters listed in [brackets] are optional. Parameters listed in (parenthesis) are required.

go [cuelistplayer]
Sends a "GO" command to the cue list player, if one is specified. If not, the command is sent to cue list player 1.

stop [cuelistplayer]
Sends a "Stop" command to the cue list player, if one is specified. If not, the command is sent to cue list player 1.

top [cuelistplayer]
Moves the cue-on-deck pointer to the top of the cue list, on the cue list player specified. If not, the command is sent to cue list player 1.

bottom [cuelistplayer]
Moves the cue-on-deck pointer to the bottom of the cue list, on the cue list player specified. If not, the command is sent to cue list player 1.

prev [cuelistplayer]
Moves the cue-on-deck pointer back one cue, on the cue list player specified. If not, the command is sent to cue list player 1.

next [cuelistplayer]
Moves the cue-on-deck pointer forward one cue, on the cue list player specified. If not, the command is sent to cue list player 1.

moveby (count) [cuelistplayer]
Moves the cue-on-deck pointer by the number (count), on the cue list player specified. If not, the command is sent to cue list player 1.

recall (subcue|cue) (id) [cuelistplayer]
Recalls the selected cue or subcue, on the cue list player specified. If not, the command is sent to cue list player 1.

update (subcue|cue) (id)
Updates the selected cue or subcue.

create (logentry|subcue|cue|cuelist|spacemap|trajectory|etc) (id=-1) (args...)
Create a new item of the selected type, with the specified arguments.

duplicate (subcue|cue|cuelist|spacemap|trajectory|etc) (id)
Duplicates the selected item.

delete (subcue|cue|cuelist|spacemap|trajectory) (id)
Deletes the selected item.

set (controlpointaddresses) = (controlpointvalue)
Sets the selected control point to the specified value.

copyset (controlpointaddresses) = (controlpointaddresses)
Copies the values from one set of control points to another set of control points.

blackbox [shellcommand]
Runs the command on the LX-ELC module, and outputs the results to a text file.

Python

Learning Python

Python is a powerful scripting language that can also be used to write full applications. CueStation includes a Script Execution window, which can run a Python script that will interface with CueStation and the Matrix3™ audio show control system. The Python language is not difficult to learn, and there are many resources available in print and online for anyone who is interested in learning.

You can download Python at ***http://www.python.org/*** which also has many other resources for Python users, including a tutorial and documentation.

Learning Python by Mark Lutz and David Ascher is published by O'Reilly, and describes everything from installing Python on your computer to creating graphical user interfaces.

If you already have some experience with other programming languages, ***http://www.diveintopython.org*** is a free online book aimed at those who are interested in skipping past the basics of programming into the details of Python.

If you are new to programming, *How to Think Like a Computer Scientist*, located at ***http://www.ibiblio.org/obp/thinkCSpy/*** is another free online book that will introduce you to the Python language with many examples and exercises.

Integrating Python Scripts

Python scripts can be added to any project file, and can be triggered to run automatically with a subcue. The Python API for CueStation is described in the next section, ***Python API*** (p. 75).

To add a python script to your project, follow these steps:

1. Add the python file(s) to the Support Files window.
2. In the Script Execution window, type the name of the file you wish to run under the :label:`Command` column.
3. Use the buttons in the **Status** column to Restart, Run, or Stop the script.

If you want the script execution to be triggered by a cue, follow the steps above and then:

1. Make sure the script is running, by clicking on the Run button.
2. Click on the number to the left of the file name to select that script.
3. Open the Capture window, and select the box next to **Python Script**, then click on the **Click to Capture New** button to capture the cue.

When the cue is recalled, the script will be run.

Python API

The following files are included with CueStation. If you are using windows, they can be found in the templates directory, under _lcs, _muscle, _python, _scripts, or _support. If you are using Mac OS, right-click on the CueStation executable and select **Show Package Contents**. The templates directory can be found under Contents/Resources/templates.

This chapter is a very brief description of the current state of the Python client API. It is not intended to be complete documentation; unfortunately you will need to look at or adapt the pythonclient.py example code to see how things work, for now.

ControlPointAddress Class

A ControlPointAddress object is an 8-item list that holds a single control point address. For example, to create a ControlPointAddress that specified the first input meter, you could do this:

```
a = ControlPointAddress(ciInput, ciMeter, 0)
```

The last 5 of the 8 tokens are implicitly zero in this case. Note that in programmer-land, ControlPointAddresses keep all the identifier tokens (e.g. ciInput and ciMeter) at the front of the address, and all the numeric indices at the end of the address. This is different from how they addresses are typically displayed to the user in CueStation: you can use the ToUserFriendly() and FromUserFriendly() methods of the ControlPointAddress class to convert to the user friendly ordering before displaying them to the user. Also note that numeric indices are internally numbered counting from zero, but 1 is added to them before displaying them to the user, since users prefer it that way.

ControlPointValue Class

A ControlPointValue object is a variant object that can hold a single value -- but that value may be any of the following types:

```
VALUE_TYPE_NULL    (No value present)
VALUE_TYPE_BOOL    (boolean value)
VALUE_TYPE_FLOAT   (floating point)
VALUE_TYPE_INT32   (32-bit signed integer)
VALUE_TYPE_STRING  (character string)
VALUE_TYPE_POINT   (Point, a.k.a. two floating point values)
VALUE_TYPE_MESSAGE (MUSCLE Message)
VALUE_TYPE_CONFIG  (CS4 System configuration object)
VALUE_TYPE_ADDRESS (ControlPointAddress)
VALUE_TYPE_INT64   (64-bit signed integer)
```

When calling SetValue() on the ControlPointValue object you will need to provide one of the above VALUE_TYPE_* tokens along with the actual value, so that the ControlPointValue knows which value type to tag the data with.

ControlPointAddressSet Classes

There are several types of ControlPointAddressSet, but they all do the same thing: specify an ordered set of ControlPointAddresses. Each class specifies its set in a different way, however, and different types of set are appropriate to use in different situations. The currently implemented ControlPointAddressSet classes are:

ListAddressSet
: Each address in the set is explicitly specified.

SingleAddressSet
: Exactly one address is explicitly specified.

TableAddressSet
: Equivalent to ListAddressSet, for our purposes.

MultiAddressSet
: Concatenates multiple subsets into a single set.

BlockAddressSet
: Specifies all addresses in a rectangular block.

These address sets are used to succinctly specify the addresses that you wish to subscribe to, unsubscribe from, query, set the values of, etc.

ControlPointValueSet Classes

These are similar to the ControlPointAddressSet classes, except that instead of holding an ordered set of ControlPointAddresses, they hold an ordered set of ControlPointValues. One important distinction to note, however, is that unlike ControlPointAddressSets which always have a finite size, the number of number of values held in a ControlPointValueSet is undefined. When you ask a ControlPointValueSet for the next value in the set, it will always give

you one, no matter what! (The semantics regarding what value it will give you are determined by the particular type of ControlPointValueSet you are dealing with). So don't try to iterate over all values in a ControlPointValueSet, or you will enter an infinite loop.

The currently implemented ControlPointValueSets are:

ListValueSet
Each ControlPointValue is specified explicitly.

SingleValueSet
A single ControlPointValue is specified explicitly.

MultiValueSet
Concatenates multiple subsets into a single set.

QNetProtocol Constant Definitions

This file (QNetProtocol.py) defines the many constants used in the CS4 communications protocol. Most of them aren't necessary for anything you are likely to do, but here are a few useful ones:

CUEMIXER_COMMAND_SUBSCRIBE

CUEMIXER_COMMAND_UNSUBSCRIBE

CUEMIXER_COMMAND_UNSUBSCRIBEALL

CUEMIXER_COMMAND_SETVALUES

CUEMIXER_COMMAND_GETVALUES

Sending command Messages with these values as the Message's command code will cause mixerd to do useful things. The best way to create these command Messages is by calling the MakeMixerCommand() function that is defined in ControlPointUtilities.py -- it will take a command code, a ControlPointAddressSet, and/or a ControlPointValueSet as arguments, and return a Message object that you can then send to the server by calling mtt.SendOutgoingMessage() (see pythonclient.py for examples of this).

LX300Protocol Constant Definitions

This file (LX300Protocol.py) defines all the LX-300 specific token values that you can use in your ControlPointAddresses (e.g. ciInput, ciOutput, ciLevel, ciMeter, etc). It also provides a couple of utility functions that you can use to convert between the tokens numeric representation (numbers between -128 and -1) and their string representation (e.g. "input").

Last but not least, the files in the muscle/python folder are also used as part of the client/server communications path. These files are as follows:

Open Sound Control

This chapter describes the OpenSoundControl protocol implemented in CueStation 4.6.0.

OpenSoundControl is a method for sending control messages to or from any device that supports it. Read more about OpenSoundControl here: ***http://www.cnmat.berkeley.edu/OpenSoundControl/***.

Lemur

This section describes functions in CueStation for mapping Matrix3 control points to controls on a Lemur or other OSC devices.

Lemur Setup

At the time of this writing, the current version of firmware for the Lemur is 1.6.3. This firmware can be downloaded from the JazzMutant website (***http://jazzmutant.com***). To create a Lemur interface project, you'll also need to download version 1.6.3 of the JazzEditor program. Procedures for uploading firmware and creating projects are described in the Lemur User Manual.

CueStation Setup

Once you have uploaded the correct Lemur firmware and created a project file, the next step is to create a few Externals subcues, to facilitate communication with the Lemur from CueStation.

1. First, create an IP alias for your Lemur. In the Subcue Library, create a new Externals subcue, and name it "Lemur: Set Alias". Add an entry, change the Type to **OpenSoundControl**, and change the Command to **Set OSC Address Aliases**.
2. In the first text box, enter a "nickname" for the Lemur (it can even be as simple as just "L"). In the second text box, enter the IP address of the Lemur. The IP address of the Lemur can be found by pressing the left-most button, with the gear-shaped icon. It is a good idea to set your Lemur to a specific static IP address, otherwise it may change without warning.
3. Recall the subcue. Now, whenever there is a text box to enter the Lemur IP, you can enter the nickname instead of looking up the IP address.
4. The next step is to add the Lemur project to the CueStation project. In CueStation, open the Support Files window. You can drag the Lemur project file directly into the Support Files window. The Lemur project file should have a .xml or .jzml file extension.
5. Once the Lemur project has been added to the Support Files, you can create a Send Project external. In the Subcue Library, create another Externals subcue, and name it "Lemur: Send Project". Add an OpenSoundControl entry, with the Send Lemur Project command.
6. For the Lemur Device IP: field, you can enter the alias name you created in the "Lemur: Set Alias" subcue (such as "L"). The Lemur XML Support File Name: should be the name of the file you dragged into the Support Files window (including the file extension).
7. For the "On Lemur Reboot" options, you can set it to automatically recall this subcue when the Lemur has been power-cycled. Change "Do Nothing" to "Recall Subcue", and then enter the ID of the "Lemur: Send Project" subcue.
8. Power-cycle the Lemur, and then recall the "Lemur: Send Project" subcue. Your should see your Lemur project appear on the Lemur screen.

You are now ready to start mapping Lemur controls to LCS control points.

> **Note**
>
> If you edit your Lemur project file, you will need to re-import it into CueStation. Simply drag the file into the Support Files window, and the previous version will be replaced. You do not need to edit the Send Project subcue, unless the file name of the Lemur project changes.

Global Mapping Options

The mapping of Lemur controls to Matrix3 control points is done entirely through the Map OSC Controls external. The first three items are not dependent on the type of objects being mapped.

OSC Device IP
Enter the IP address of the Lemur, or the alias name you created in ***CueStation Setup*** (p. 79).

OSC Device Port
This field defaults to 8000, which is the port the Lemur uses. Other OSC devices may use a different port.

Existing Mappings
This field tells the system what to do with any pre-existing OpenSoundControl mappings when this external is executed. The options are: Don't Clear any Existing Mappings, Clear Any Existing Mappings for this Device, and Clear all Existing Mappings.

The individual mapping controls are dependent on the type of Lemur objects. Click on Add New Mapping to map each Lemur object to a control point, or set of control points. The mapping subcue must be recalled before the mappings will be applied.

Mapping Fader Objects

Use the following settings for Faders, Knobs, and MultiSlider objects.

OSC Name
All OSC names should start with a "/". Then enter the name of the control object on the Lemur, followed by "/x". For instance, if you have a Fader object named "MicInput", you would enter "/MicInput/x".

Object Behaviour
For Fader objects, select "Float Range Behaviour".

LCS Address
Enter the name of the control point to which the Lemur object will be mapped, such as "Input 1 Level".

For MultiSlider objects with more than one slider, set the LCS Address to a range, such as "Input 1-4 Level".

Time Avg (LCS Address)
Check the top Time Avg box if you want the Matrix3 control point to take its value from an average over time of the Lemur object's value. Enter the time and rate for the average to be calculated.

Time Avg (OSC Address)
Check the lower Time Avg box if you want the Lemur object to take its value from an average over time of the Matrix3 control point's value. Enter the time and rate for the average to be calculated.

Value Range (LCS Address)
Check top Value Range box if you want to constrain the Matrix3 control point's value to fall within a certain custom range. By default, the range is set to the possible values of the control point.

Value Range (OSC Address)
Check the lower Value Range box if you want to constrain the Lemur object's value to fall within a custom range. Typical values are between 0 and 1.

Note

For Lemur objects containing a set of controls, you can address each one individually. For instance, if you have a MultiSlider object named "Inputs", you would enter "/Inputs/x:0" for the OSC Name in the first mapping, "/Inputs/x:1" for the second mapping, and so on. This applies to Button and MultiBall objects as well.

Mapping Button Objects

Use the following settings for Pads, Switches, and other button objects.

OSC Name
Enter the name of the control object on the Lemur, followed by "/x". For instance, if you have a Pads object named "Cue1", you would enter "/Cue1/x".

Object Behaviour
For button objects, select "Button Behaviour".

Button Recalls
Set an "On Press" action, an "On Release" action, or both. Choose whether to update or recall a cue or subcue, and enter the cue or subcue ID.

Mapping SpaceMap Objects

Use the following settings for the MultiBall object.

OSC Name
For MultiBall objects, you will need to create two mappings: one mapping for the X coordinate, and another for the Y coordinate. So set the first mapping to "/Multiball/x", and the second to "/Multiball/y".

Object Behaviour
Select "Float Range Behaviour".

LCS Address
Enter the name of the control point to which the Lemur object will be mapped, such as "Bus 1 Position X" or "Bus 1 Position Y".

Time Avg (LCS Address)
Check the top Time Avg box if you want the Matrix3 control point to take its value from an average over time of the Lemur object's value. Enter the time and rate for the average to be calculated.

Time Avg (OSC Address)
Check the lower Time Avg box if you want the Lemur object to take its value from an average over time of the Matrix3 control point's value. Enter the time and rate for the average to be calculated.

Value Range (LCS Address)
Check top Value Range box if you want to constrain the Matrix3 control point's value to fall within a certain custom range. For instance, you may want to constrain it to the size of your SpaceMap.

Value Range (OSC Address)
Check the lower Value Range box if you want to constrain the Lemur object's value to fall within a custom range. Lemur objects typically produce values are between 0 and 1, which by default are mapped to the minimum and maximum value of the Matrix3 control point.

OSC Address Patterns

You can also send OSC commands to a Matrix3 server from other OSC devices or software programs.

The CueStation server "mixerd" listens for incoming OpenSoundControl commands on port 14005 (port 14055 in the demo version). mixerd listens for both UDP packets and TCP connections on that port. If a TCP connection is received, the expected protocol is the standard one for OpenSoundControl-over-TCP: a 4-byte big-endian length field, followed by an OpenSoundControl packet of that length, then repeat as necessary.

Below are descriptions of the method commands that clients can send to mixerd in their OSC packets:

/go

Arguments: Cue List Player ID (optional)

Equivalent to pressing the "go" button in the Transport window. This command takes zero or one arguments. It causes the current cue-on-deck in the current Cue List to be recalled, and the cue-on-deck pointer to be advanced.

If an integer argument is specified, it is taken to be the Cue List Player index (0-126). If it isn't specified, player #1 is assumed (for backwards compatibility)

Cue List Player Example: "Go" on Cue List Player 4.

```
/go ,i 5
```

/stop

Arguments: Cue List Player ID (optional)

Equivalent to pressing the "stop" button in the Transport window. This command takes zero or one arguments. If zero arguments are provided, /stop causes all current automation activity (including cue list autofollows, SpaceMap trajectory playback, Wild Tracks audio playback, fader fades, etc) to be immediately stopped.

If an integer argument is specified, it is taken to be a Cue List Player index (0-126), and only that Cue List Player will be stopped. If the index is 127, this is interpreted as a special case meaning "all Cue List Players in the current config".

/moveby

Arguments: ,i + N

Arguments: ,ii

Move the "on deck cue" in the cue list up or down by N steps.This command takes a single integer argument which indicates the number of entries that the "on deck cue pointer" should move forward in the current cue list. So for example, +1 is equivalent to pressing the "next" button in the Transport window once, and -1 is equivalent to pressing the "previous" button in the Transport window once.

If you wish to move immediately to the top or bottom of the cue list, you can do so by passing a very large positive or negative value as the argument here. (this works because the cue-on-deck pointer's position will be constrained to keep it from moving "off the ends" of the cue list)

If a second integer argument is specified, it is taken to be the Cue List Player index (0-126). If it isn't specified, player #0 is assumed (for backwards compatibility). If 127 is specified, all cue list players will be affected.

Example: Move forward by 3 cues.

```
/moveby ,i 3
```

/recall

Arguments: ,iii + X + Y + Z

Recall a cue or subcue.

This command takes two or three integer arguments. The first argument should either be zero (to indicate a cue recall) or one (to indicate a subcue recall). The second argument is the ID of the cue (or subcue) to be recalled.

If a third argument is specified, it will be parsed as the index of the Cue List Player that should do the cue/subcue recall. If the third argument is not specified, Cue List Player #0 (aka the first one) will be used by default.

Example: Recall cue 14 on Cue List Player 3.

```
/recall ,iii 1 14 3
```

/set

Arguments: ,s* + [ControlPointValues]

Set one or more control points to one or more values, using a string.

Arguments: ,b** + [OSC blob]

Set one or more control points to one or more values, using address "blobs".

This command is quite flexible in that its arguments can be sent in several forms. In any form, however, the arguments indicate a set of one or more ControlPointAddresses, followed by a list of one or more ControlPointValues. The specified ControlPointValues will be assigned to the specified ControlPointAddresses, in the order they are listed.

The easy way to specify the set of ControlPointAddresses is as a string. In this case, the string takes uses the exact same human-readable format as is seen in the Subcue Library window. Here are a few example address strings that you could use:

"Input 1 Mute" "Bus 1,4,9 Invert" "Output 1-8 Level" "Bus 1-3 Output 5,7,15-20 Level"

You can even specify several sets in a single string if you prefer, by separating the sets with semicolons, like this:

"Input 1-4 Mute; Output 1-8 Level; System Level"

A less user-friendly but more server-CPU-efficient way to specify the set of ControlPointAddresses is as a set of one or more "address blobs". An "address blob" represents a ControlPointAddress using OpenSoundControl's "blob" data type. In this case contents of each blob should be a series of between one and eight (16-bit, big-endian) numbers, encoded as two bytes each. Negative numbers have special meanings as tokens, as documented in cpindices.py. For example, -114 is the token for "Input", and -113 is the token for "Output", and so on. Therefore, if you wanted to express "Input 1 Mute" as a blob, the array of int16s would look like this:

{-114, -91, 0} // i.e. (ciInput, ciMute, 0)

Note that the "0" indicates input 1 (indices are always numbered starting from zero in this format) and that the numeric indices should always appear after the negative token values. (Also note that trailing zeroes are optional and may be omitted -- i.e. in this case {-114, 91} would mean the same thing) As another example, here is "Bus 5 Output 7 Level" expressed as an address-blob: {-110, -113, -94, 4, 6} // i.e. (ciBus, ciOutput, ciLevel, 4, 6) You can specify as many address-blobs as you like in this command; each address-blob specifies one address to set to the values that are specified next.

Next, you should specify one or more value arguments. These arguments may be any of the following OpenSoundControl argument types:

i - 32-bit integer

f - 32-bit floating point

s - OSC string

F - boolean false

T - boolean true

h - 64-bit integer

P - Point (a non-standard, propietary type which consists of 2 32-bit big-endian floats)

The number of value arguments included in your /set command should be less than or equal to the number of addresses specified in the address arguments -- if there are more values than addresses, the surplus values will be ignored.

If the number of ControlPointValues specified is less than the number of ControlPointAddresses specified, the last ControlPointValue in the values list will be re-used for the remaining ControlPointAddresses. This behavior is useful when you wish to set a large number of control points to the same value.

Example: Clear an entire 64x64 Matrix. /set ,sf 'Bus 1-64 Output 1-64 Level' -90.0

/setwf

Arguments: ,s*ff* + [ControlPoints] + [WaitTime] + [FadeTime] + [ControlPointValues]

Set one or more control points, with a wait and fade time as well.

This command is similar to /set, except that after the address argument(s) (but before the value argument(s)) you must specify two floating point arguments: a wait time and then a fade time. Both arguments should be expressed in seconds, and should range between 0.0 and 1000.0.

Note that the LX-300 firmware only supports doing waits and fades on certain control points (e.g. Matrix Levels). If you specify control points for which wait and fade times are not supported, the wait and fade times will be ignored and those control points will be set to the specified value immediately.

Also note that due to the more complex semantics of this command, feedback from the server is not suppressed. So for example if you send a /setwf command to set Input 1 Level to unity, and you are subscribed to Input 1 Level, you will soon receive a /got OSC message indicating that Input 1 Level has been set to unity.

Example: Wait 3 seconds, then fade up the first row of a 64x64 Matrix over 5 seconds. /setwf ,sfff 'Bus 1 Output 1-64 Level' 3.0 5.0 0.0

/setblock

Arguments: ,s* + [FirstControlPointAddress] + [SecondControlPointAddress] + [ControlPointValues]

Sets a block of control points to a specified value.

Arguments: ,sb** + [FirstAddressBlob] + [SecondAddressBlob] + [ControlPointValues]

Sets a block of control points to a specified value, using address "blobs".

When used with a string address, this command behaves identically to `/set`. When used with "blob-addressing", however, the blobs are interpreted differently. Each pair of specified blobs is presumed to indicate a "block" of ControlPointAddresses. The server will iterate through all addresses in the block in order. So, for example, if you specified two "blob-address" arguments, say (Input 1 Level) and (Input 8 Level), they would be interpreted as indicating inputs levels 1 through 8 inclusive.

{-114, -94, 0} (i.e. first address = ciInput, ciLevel, 0) {-114, -94, 7} (i.e. last address = ciInput, ciLevel, 7)

A block can be multi-dimensional. For example, if you wanted to specify Outputs 1-8 of Buses 2-4 in the matrix, you could add these two blobs:

{-110, -113, -94} (i.e. first address = ciBus, ciOutput, ciLevel, 1, 0) {-110, -113, -94} (i.e. last address = ciBus, ciOutput, ciLevel, 3, 7)

You can add more than one pair of blob-addresses, if you wish to specify more than one block of addresses. For example, if you wanted to specify Input Mutes 3-8 _and_ Input Levels 10-20, you could add these:

{-114, -91, 2} (i.e. first address = ciInput, ciMute, 3) {-114, -91, 7} (i.e. last address = ciInput, ciMute, 8) {-114, -94, 9} (i.e. first address = ciInput, ciLevel, 10) {-114, -94, 19} (i.e. last address = ciInput, ciLevel, 20)

If there are an odd number of address-blobs, the last address-blob is interpreted as a single address.

After the blobs, the control point value field(s) should then be specified as described in the `/set` documentation above.

/setblockwf

Arguments: ,sff* + [FirstAddress] + [SecondAddress] + [WaitTime] + [FadeTime] + [ControlPointValues]

Similar to /setblock, except that you can also specify a wait and fade time.

Arguments: ,b*ff* + [FirstAddressBlob] + [SecondAddressBlob] + [WaitTime] + [FadeTime] + [ControlPointValues]

Set a block of control points with a wait and fade time, using address blobs.

This command is similar to /setblock, except that after the address argument(s) (but before the value argument(s)) you must specify two floating point arguments: a wait time and then a fade time. Both arguments should be expressed in seconds, and should range between 0.0 and 1000.0.

Note that the LX-300 firmware only supports doing waits and fades on certain control points (e.g. Matrix Levels). If you specify control points for which wait and fade times are not supported, the wait and fade times will be ignored and those control points will be set to the specified value immediately.

Also note that due to the more complex semantics of this command, feedback from the server is not suppressed. So for example if you send a /setblockwf command to set Input 1 Level to unity, and you are subscribed to Input 1 Level, you will soon receive a /got OSC message indicating that Input 1 Level has been set to unity.

Example: Wait 3 seconds, then fade up rows 1-3 of a 64x64 Matrix over 5 seconds. /setblockwf ,bbfff {ciBus, ciOutput, ciLevel, 0, 0} {ciBus, ciOutput, ciLevel, 2, 63} 3.0 5.0 0.0

/get

Arguments: ,s + [ControlPointAddresses]

Retrieve the current value of one or more control points.

Arguments: ,ss + [ControlPointAddresses] + [TagString]

Retrieve the current values of one or more control points, and include a tag string.

This command lets you query the server for the current state of one or more control points. The control point addresses should be specified either via a human-readable string or via a series of one or more address-blobs, exactly as described in the `/set` documentation.

Values are not specified in this command, of course, since you are requesting values, not sending them.

You may, however, optionally specify a string argument after the address argument(s). This string may be any string you like. It will be used as a tag for your request, and will be sent back to you in the reply packet(s). This is useful to help determine which reply packets are associated with which requests.

If you do not include a tag string, a unique tag string will be chosen for you by the server.

The server will send back the requested data as a series of one or more `/got` OSC packets. If the `/get` command was received on from a TCP stream, the `/got` packets will be sent back to that TCP stream; if the `/get` command was received in the form of UDP packets, the `/got` packets will be sent back to the IP address and port that the `/get` packet was sent from.

For info on the `/got` packet's format, see the section on `/got` at the bottom of this document.

/getblock

Arguments: ,b* + [AddressBlob]

Retrieve the current values of a set of control points, using an address blob.

Arguments: ,b*s + [AddressBlob] + [TagString]

Retrieve the current values of a set of control point, using an address blob, and specifying a tag string.

This command is the same as /get, except that any included address-blobs will be interpreted in pairs instead of as individual addresses. See /setblock for information on how this is done.

/ping

Arguments: (none)

Causes a `/pong` packet with the same data to be sent back to the client (any argument types may be used).

This command's packet will be immediately sent back to the client, with the only difference being that the method name string will be changed from `/ping` to `/pong`.

/python

Arguments: ,is + [ScriptID] + [CommandString]

Send a command string to a currently running Python script: ",is"

This command lets you specify a string that will be sent to a currently executing Python script (as seen in CueStation's Script Execution window). Assuming that the Python script is based on the BasicClient.py base class, the string will be passed to the UserCommandReceived() callback method. The default implementation of that method executes the string as Python source code; customized scripts are free to override it to handle the string differently, of course.

The first argument is the index of the script execution slot that the command should be sent to. This integer should be a value between 0 (the first execution slot, at the top of the Script Execution window) and 31 (the last execution slot). The string may be any string you like, although it does need to be short enough to fit into an OSC packet.

/subscribe

Arguments: ,s + [ControlPointAddresses]

Subscribe to a set of control point addresses: ",s" ",b*"

Arguments: ,b* + [AddressBlob]

Subscribe to a set of control point addresses, specified by an address blob.

This command has syntax similar to /get, except that the specified control point addresses are remembered by the server, which will continue to send `/got` updates to your client whenever any of the addresses change. This allowed your client to keep track of the current state of the specified addresses at all times, without having to constantly poll their state via /get packets.

Unlike `/get`, no request-tag can be specified in a /subscribe command. The `/got` packets returned by subscriptions will always have an empty string ("") as their tag value.

Note that subscriptions are handled per control point address, so it is possible to "build up your subscription set" via multiple /subscribe commands, and likewise you can unsubscribe from any arbitrary sub-portion of your subscription set at any time.

Trying to subscribe again to control points that you are already subscribed to will cause the server to immediately re-send you those control points' current values, but otherwise will have no effect. (i.e. a client can't have two simultaneous subscriptions to the same control point)

For TCP clients, the subscriptions will remain active until they are countermanded by a /unsubscribe, /unsubscribeblock or /unsubscribeall command, or until the client's TCP connection is broken.

For UDP clients, the subscriptions will remain active until they are countermanded by a /unsubscribe, /unsubscribeblock or /unsubscribeall command, or until at least 30 seconds have passed without the server receiving any UDP packets from your client. For this reason, it is important to be sure that your UDP client sends an OSC packet to the server at least once every 30 seconds, to avoid losing your subscriptions. An empty `/ping` packet will be sufficient.

/subscribeblock

Arguments: ,b* + [AddressBlob]

Similar to `/subscribe`, but with addresses specified as a block: ",b*"

`/subscribeblock` works the same as `/subscribe`, except that any address-blob pairs will be interpreted as blocks of addresses, rather than as separate single addresses. See the `/setblock` documentation for syntax details.

/unsubscribe

Arguments: ,s + [ControlPointAddresses]

Unsubscribe from a set of control point addresses.

Arguments: ,b* + [AddressBlob]

Unsubscribe from a set of control point addresses, by specifying an address blob.

This command has the same syntax as `/subscribe`, but the opposite effect. Any control point addresses specified by this command that are currently subscribed to by this client will have their subscription-records removed from the server, so that in the future when those control point addresses change, your client will no longer be notified. For control points that your client is not currently subscribed to, this command will have no effect.

/unsubscribeblock

Arguments: ,b + [FirstAddress] + [EndAddress]

Unsubscribe to a block of addresses, specified as a blob

`/unsubscribeblock` works the same as `/unsubscribe`, except that any address-blob pairs will be interpreted as blocks of addresses, rather than as separate single addresses. See the `/setblock` documentation for syntax details.

/unsubscribeall

Arguments: (none)

Cancel all current subscriptions for this client

This command takes no arguments. It causes any and all current subscriptions for this client to be cancelled. This command is useful for returning your client the default "completely-unsubscribed" state without having to specify all the control points your client is currently subscribed to.

It's recommended that UDP clients always send this packet on startup, just so that they can be guaranteed a known state on the server (otherwise the server might still have subscriptions in your client's name, from a previous session).

/log

Arguments: ,s + [LogMessage]

Sends the specified log message to the system log.

Arguments: ,is + [Level] + [LogMessage]

Sends the log message to the system log, at the specified level.

This command sends the message you specify to the system log (as shown in the CueStation Log window). The first argument is an integer indicating the "severity level" of the message, and it should be one of the following values:

1 = Critical Error
This message indicates a critical system failure.

2 = Error
This message indicates an error condition.

3 = Warning
This message indicates a warning.

4 = Info
This message is a normal informational message.

5 = Debug
This message contains debugging information only.

6 = Trace
This message is being used to trace program execution.

If you skip the first argument (i.e. include only a string argument), then the message will default to level 4 (info).

The second argument is the string that you want to have added to the log.

OCS Reply Packets

/got

Contains control point value data previously requested by a `/get` or `/subscribe` packet: ",s((b*)*)"

The /got packet should not be sent by clients -- rather, it is sent by the server back to the clients in response to a `/get` or `/subscribe` packet. The /got packet contains as its first argument the tag string that was passed in to the `/get` command. If no tag string was passed in to `/get`, the server will generate a unique string for the `/got` packets. If the `/got` packet is being sent in response to a `/subscribe` packet, the response tag string will always be empty (i.e. "").

After the tag string, the remainder of the packet will consist of one or more (address-blob, value) pairs. The address-blob format and value formats are the same as the ones described in the `/set` command documentation. Each pair indicates that the current value for (that address) is (the provided value).

A single /get command may result in more than one /got reply, if there is too much data to fit into a single packet. You can use the tag string to determine whether or not two different /got packets correspond to the same `/get` command.

If you need to know whether or not you have received all the /got packets corresponding to your request yet, or whether more are coming, you can find out by sending a second `/get` command immediately after your first one. The second `/get` command can be trivial; just make sure it has a different tag-string from the first one. Once you receive a packet with the second command's tag string, you can assume that the first request has been fully handled (requests are handled in FIFO order). (Note that you can't use the `/ping` command for this purpose, since `/ping` short-circuits the data path that `/get` uses and so you would likely receive the `/pong` reply before you received all of your `/got` replies)

/pong

Response to the `/ping` command.

When the server receives a `/ping` command, it will send back a `/pong` reply that is otherwise byte-for-byte identical to the `/ping` packet. This command is useful for network testing and as a keep-alive for UDP subscriptions (see the `/subscribe` documentation for details)

Example OSC Packets

Below are hex dumps showing the contents of various UDP packets that represent valid Matrix3/OSC commands and replies. These same byte sequences are valid for sending over TCP to a Matrix3 system, but when using TCP you must preface them with a 4-byte, big-endian byte-count field, so that the TCP OSC parse can know where the packet ends and the next packet begins.

/go
Equivalent to pressing the "go" button in the Transport window:

2f 67 6f 00 2c 00 00 00

/stop
Equivalent to pressing the "stop" button in the Transport window:

2f 73 74 6f 70 00 00 00 2c 00 00 00

/moveby 1
Equivalent to pressing the "next" button in the Transport window:

2f 6d 6f 76 65 62 79 00 2c 69 00 00 00 00 00 01

/moveby -1
Equivalent to pressing the "previous" button in the Transport window:

2f 6d 6f 76 65 62 79 00 2c 69 00 00 ff ff ff ff

/recall cue 5
Tell the system to recall Cue #5:

2f 72 65 63 61 6c 6c 00 2c 69 69 00 00 00 00 00 00 00 00 05

/recall subcue 5
Tell the system to recall Subcue #58:

2f 72 65 63 61 6c 6c 00 2c 69 69 00 00 00 00 01 00 00 00 3a

/set input 1 mute enabled
2f 73 65 74 00 00 00 00 2c 73 54 00 69 6e 70 75 74 20 31 20 6d 75 74 65 00 00 00 00

/set output 5 level to +5.5dB
2f 73 65 74 00 00 00 00 2c 73 66 00 6f 75 74 70 75 74 20 35 20 6c 65 76 65 6c 00 00 40 b0 00 00

/get input 1-8 level
2f 67 65 74 00 00 00 00 2c 73 00 00 69 6e 70 75 74 20 31 2d 38 20 6c 65 76 65 6c 20 00 00 00 00

/ping HelloSailor
2f 70 69 6e 67 00 00 00 2c 73 00 00 48 65 6c 6c 6f 53 61 69 6c 6f 72 00

/python 1 "print Hello"
Send the command "print Hello" to python script ID 1:

2f 70 79 74 68 6f 6e 00 2c 69 73 00 00 00 00 00 70 72 69 6e 74 20 22 48 65 6c 6c 6f 22 00 00 00

/subscribe input 1-8 level
2f 73 75 62 73 63 72 69 62 65 00 00 2c 73 00 00 69 6e 70 75 74 20 31 2d 38 20 6c 65 76 65 6c 20 00 00 00 00

/unsubscribe input 1-8 level
2f 75 6e 73 75 62 73 63 72 69 62 65 00 00 00 00 2c 73 00 00 69 6e 70 75 74 20 33 2c 35 2c 37 20 6d 75 74 65 20 00 00 00

/unsubscribe all
Cancel all current subscriptions for this client:

2f 75 6e 73 75 62 73 63 72 69 62 65 61 6c 6c 00 2c 00 00 00

Example OSC Reply Packets

/got

From a subscription to "input 1-2 level":

2f 67 6f 74 00 00 00 00 2c 73 62 66 62 66 00 00 72 65 71 2d 30 00 00 00 00 00 00 04 ff 8e ff a2 c2 b4 00 00 00 00 00 06 ff 8e ff a2 00 01 7f 08 c2 b4 00 00

/pong

From a `/ping HelloSailor`:

2f 70 6f 6e 67 00 00 00 2c 73 00 00 48 65 6c 6c 6f 53 61 69 6c 6f 72 00